



Inside this issue: The search is on for a person to chair the internal review committees. (See story, page 2).

Learning objectives endorsed by Senate

Well-educated students who are the architects of their own learning is the aim of learning objectives endorsed by Senate Dec. 16, said Prof. John Bell, Languages and Literatures, chairman of the Board of Undergraduate Studies. (BUGS)

Senate approved the *Report on Learning Objectives* containing the learning objectives set out and defined by BUGS (see pages 4 and 5): literacy, numeracy, sense of historical development, global understanding, moral maturity, esthetic maturity, understanding of forms of inquiry, depth and breadth of understanding, independence of thought and

love of learning.

BUGS, in consultation with the Senate Committee for Educational Development (SCED), was instructed to prepare "a set of learning objectives common to all undergraduate programs" in Recommendation 1.1 of *Toward 2000: Challenges and Responses. Aims of the University of Guelph*. The *Report on Learning Objectives* also addressed Recommendations 1.2 to 1.6 of the aims document, which said each program committee should develop a statement of learning objectives and modify its programs to be consistent with University objectives, and that the learning

objectives should place the educational quality and objectives of undergraduate programs ahead of discipline or department interests; foster independent learning and involvement by students in the learning process; increase the emphasis on problem-solving skills and making value judgments with less emphasis on rote learning; and incorporate the various aspects of information technology into the education process.

The report acknowledges existing strengths in the University's instructional program and the need to adapt the objectives locally, recognizes the special responsibility of students to take charge of their own learning, and the important supporting role of the Library and the Office for Educational Practice.

Senate also approved that program committees report to BUGS by October 1987 on steps to implement learning objectives and that BUGS conduct a dialogue with program committees about ways in which learning objectives can be reflected in proposals for program changes. BUGS is also to present to Senate by December 1987 a report on the progress made towards implementation of the learning objectives and — because this will be a gradual process — BUGS will periodically give progress reports to Senate.

SCED is also to investigate ways to assist implementation of the objectives, and initiate a program by the fall of 1987. Senate also approved an invitation to students to consider ways they can contribute to the implementation of the learning objectives, and to communicate their comments and suggestions to appropriate boards and committees. Senate also approved that academic and academic/administrative priorities be adjusted to reflect the University's commitment to its learning objectives.

Prof. Jay Newman, Philosophy, told Senate he was troubled by the method for implementing the objectives because Senate was giving the mandate to board and committees rather than to faculty. The University is being swamped in bureaucratic procedures, he said, and professors are being robbed of their role and responsibility to teach. Bell said the spirit of the report is not to deny the experience of faculty, but an attempt to share that experience and to make Senate a forum to share ideas that have worked across the University community. ○



The cheque is as big as the donation as President Burt Matthews, right, hands over the University's largest-ever contribution to United Way to Jim Rooney, the City of Guelph's 1986 campaign cabinet chairman. At left is Don McIntosh, chairman of the University's 1986 appeal.

(Photo by Herb Rauscher, Illustration Services).

Senate summary

In other business, Senate:

- approved a Board of Undergraduate Studies (BUGS) motion that the significance of a prerequisite course as the means to identify a student's background for a specific course and also as a prior requirement for admission to that course be reaffirmed. An instructor may give a student permission to register in a course if the instructor feels the student's background is appropriate;

- approved a BUGS motion that in the spring semester of 1987 only a student with the stated prerequisite or prerequisites for a course, or a student with written permission from an instructor, will be allowed to either preregister or register in a course. If there is a limit on enrolment in a course, the student with the prerequisite will have priority over the student without the prerequisite;

- approved a BUGS recommendation that a student will normally be permitted to gain credit in a maximum of 20 courses in the General Studies Program;

- approved Board of Graduate Studies (BGS) changes to the 1987/88 *Graduate Calendar*;

- approved a BGS proposal for a change in the D.V.Sc. program description to require a student to write a thesis instead of a major paper. The Ontario Council on Graduate Studies (OCGS) requires that all doctoral programs include a thesis. BGS says OCGS will not proceed with the periodical appraisal of the program until the change is made;

- received for information BGS's additions to graduate and associated graduate faculty and — a new category — provisional graduate faculty: *Graduate faculty* — Leslie Ferrier, Food Science; *Associated graduate faculty* — B.J. Shuter, University of Toronto/Zoology; Theo Blom, Horticulture Research Institute of Ontario, Vineland/Horticultural Science; Neil Evernden, York University, and Edward Ralph, University of Toronto, both Landscape Architecture.

Five faculty have been named provisional graduate faculty — Clarence Swanton, Crop Science; Shai Barbut, Food Science and Animal and Poultry Science; Art Hill, Food Science; Kris Inwood, Economics; and Hung Lee, Environmental Biology.

In the past, newly appointed faculty could not be supervisors of graduate students until they had gained committee and research experience. Now, as provisional graduate faculty, they may teach graduate courses and serve as members of supervisory and examination committees or as co-supervisors of graduate students. Provisional graduate faculty status is for up to three years when a recommendation for transfer to full graduate faculty status may be made. The provisional designation will not appear in the *Graduate Calendar*, but it will appear in reports to Senate, and transfers to full graduate faculty status will also be reported to Senate. BGS also reaffirmed that it is responsible for approval of all temporary graduate faculty appointments whether for teaching graduate courses or for service on supervisory committees;

- approved the appraisal brief for the PhD program in geography in the field of rural resource evaluation and environmental analysis for forwarding to OCGS;

- approved housekeeping changes to OCGS bylaws;

- approved a new course, "Business Communication: "Speaking and Writing," for the Associate Diploma in Agriculture Program, beginning in the winter semester, and approved deletion of courses "Public Speaking" and "Practical and Scientific Writing II" from the same program;

- approved a Committee on Graduation and Ceremonies motion on a request from OVC to hold a special convocation in September 1987 to celebrate the college's 125th anniversary. Senate also temporarily suspended one of its regulations on a limit on the number of honorary degrees that can be conferred in any one academic year (eight and not more than three of these of the same kind) for this special convocation;

- approved four new awards and two bursaries presented by the Committee on Awards (see page 7);

- approved a Committee on University Planning motion to revise the membership of the internal review committees (IRCs) (see *at Guelph* Dec. 11, 1986) to include a permanent chair of the IRCs, a dean appointed from among the deans of colleges, the dean of graduate studies or dean of research (but not including the dean of the college of the department that is being reviewed), one member of CUP from an unrelated department who is a Senate appointee and two faculty members from other departments;

- received for information CUP's estimates of the budget for Year I of the internal review process;

- received for information CUP's schedule of reviews and criteria for the review of academic departments and schools;

- received for information CUP's report on strategic planning at the University;

- received for information CUP's report on the membership of the task forces on mechanisms for making faculty appointments and on agriculture (see *at Guelph* Dec. 11, 1986); and

- received for information a Centre for International Programs (CIP) report on the appointment of CIP associates. The establishment of CIP associates is in response to *Towards 2000: Challenges and Responses. Aims of the University of Guelph*, which says Guelph will incorporate an appropriate international perspective into all parts of the University. The associates, holding one- to three-year terms, will encourage international perspectives in teaching, increase the emphasis on international development research and increase service of the University in international development projects.

The first University associates are Profs. Nora Cebotarev, Sociology & Anthropology; Harry Cummings, University School of Rural Planning and Development; O.P. Dwivedi,

Political Studies; Doug Killam, English Language and Literature; Hugh MacCrimmon, Zoology; and Dr. Janet Wardlaw, associate vice-president, academic, all serving for two years; Truman Phillips, Agricultural Economics and Business, and Jim Shute, Rural Extension Studies, three years; and Elizabeth McGregor, OVC, one year. External associates are Prof. Ralph Campbell, director, international development officer, Association of Universities and Colleges of Canada, for three years; John Cairns, retired director of CIP and a former UNESCO director, for three years; and Dr. Lewis Perinbam, vice-president, special program branch, Canadian International Development Agency, for one year. ○

Internal review person sought

Notice from University Secretariat

Nominations are invited for the position of chair of the internal review committees, Committee on University Planning.

The periodic internal review of academic units at the University will begin early in 1987 as the result of a directive given to CUP by Senate.

The purpose of periodic reviews is to help departments and schools strengthen and improve their programs as part of the primary aim of the University to encourage excellence in all its activities.

Internal review committees will be struck to carry out the review of each academic unit. All academic units will participate in the review process over a seven-year period. A senior academic in the University will chair all the review committees functioning in a given year.

The chair of the committees will ensure that all units are reviewed in a manner that is consistent, sensitive, constructive and compatible with the purpose of the review process.

The chair will be seconded to the Office of Institutional Analysis and Planning for 30 per cent of her/his time. Compensation will be provided from the office of the vice-president, academic, to the chair's department. The secondment will be for a three-year period with opportunity for renewal for a second term.

Nominations (or applications) will be welcomed on behalf of candidates who are sensitive, have a University-wide perspective and who have a commitment to excellence in teaching, research and service at the University. Reply to Barbara Abercrombie, University Secretariat, by Jan. 31. ○

Challenge winter's boredom

Continuing Education is encouraging people to "get more out of life" by pursuing an interest, developing a skill or gaining a new understanding through its winter session of non-credit courses. New course offerings for 1987 reflect both the needs and the interests of contemporary society, says program manager Louise McMillan.

From the Department of Family Studies comes a new course for the 20 per cent of North American families headed by one parent. In "Single-Parent Families," therapist Melba Tanner will explore the development of a lifestyle that can enrich both parent and child.

Virginia Gillham, Library, is offering a new communications course that will tell you "Where to Go For What You Want to Know." It will introduce participants to the available sources and technology that can make research, report writing and information gathering easier.

In "How to Learn a Language," Prof. Francois Pare, Languages and Literatures, will remove the fog surrounding language studies, explain what to expect from a language course and offer learning strategies to maximize its benefits. The \$15 course fee is applicable as a credit toward any other winter '87 language course, including the new "Business Communications in French" with Pierre Joanis, which aims to strengthen business relationships and expand markets.

Other language courses include the popular

"Certificate Program in French as a Second Language," "Conversational Spanish," and the new "Introduction to Mandarin Chinese," taught by graduate student Dong Shouliang. He will be assisted by Susan Mellor, who taught English in a Shanghai university while on sabbatical with her husband, Prof. Peter Brigg, English Language and Literature.

Mellor will draw on the experiences of her family and of invited guest lecturers for another course, "China: An Introduction to the Dragon."

Continuing Education has added new courses in literature, a popular interest area. "The Goddess in Contemporary Literature" with magazine editor Jacqueline Johnson will explore the new genre that surrounds the return of spirituality in feminine terms. "The Canadian Renaissance" with Prof. Tim Struthers, English Language and Literature, will feature a cabaret-style setting with presentations by four of the country's most influential literary figures — fiction writer John Metcalf, critic Geoff Hancock, poet Tim Inkster and poet/translator Michael Harris.

Literary interests continue in "The Name of the Rose," which will study the philosophies of author Umberto Eco and the medieval society depicted in his suspense novel. Graduate student David Baxter will look at Eco's conception of the reader's role in literature.

In a new "Great People" series, Prof. Harry Lane, Drama, will use the University's Shaw

Collection to provide a study of the playwright and his works. A second course with Prof. Lou Abbott, History, will chronicle the life of Winston Churchill as it epitomizes the first 50 years of this century.

The biology category offers a new eight-part lecture series on "The Human Machine" with Prof. George Barker, Botany, and the ever-popular "The Wonder of Birds," taught by graduate student David Prescott.

The 50-course winter program includes a number of other favorites: "Wine Appreciation," "Calligraphy" and "Singing for Non-Singers," as well as a complete offering of language, business and microcomputing courses. This will be the fifth year for "Art for Amateurs and Connoisseurs," a study of fine and decorative art sponsored by Continuing Education and the Macdonald Stewart Art Centre. It will culminate with an art tour of New York.

Courses that focus on practical skills have been long-time favorites; this year these include "Residential Landscape Design," "Rose Gardening" and "Growing Lilies." Day courses in the part-time and hobby farming series will be offered again, as will the certificate programs in "Athletics Management," "Personnel and Industrial Relations" and "Human Resources Management."

For a complete listing, contact Continuing Education, Room 160, Johnston Hall, Ext. 3957. ○

CPS advisory council meets

The College of Physical Science advisory council met Nov. 24 at the Arboretum.

Members of the council are: Dr. William Cochrane, chairman and chief executive officer, Connaught Laboratories Ltd., Toronto; Alex Curran, president, SED Systems, Saskatoon; Dr. Keith Ingold, associate director, division of chemistry, National Research Council, Ottawa; Dr. Allen Krantz, research director, Syntex (Canada) Inc., Mississauga; Dr. Gordon MacNabb, associate to the principal, Queen's University; Dr. James Parr, general director, Ontario Science Centre, Don Mills; George Sekely, vice-president, computers and communications, Canadian Pacific Ltd., Toronto; Jay Ingram, "Quirks and Quarks," CBC, Toronto; and Dr. Martin Smith, vice-president, Bruker Spectrospin (Canada) Ltd., Milton.

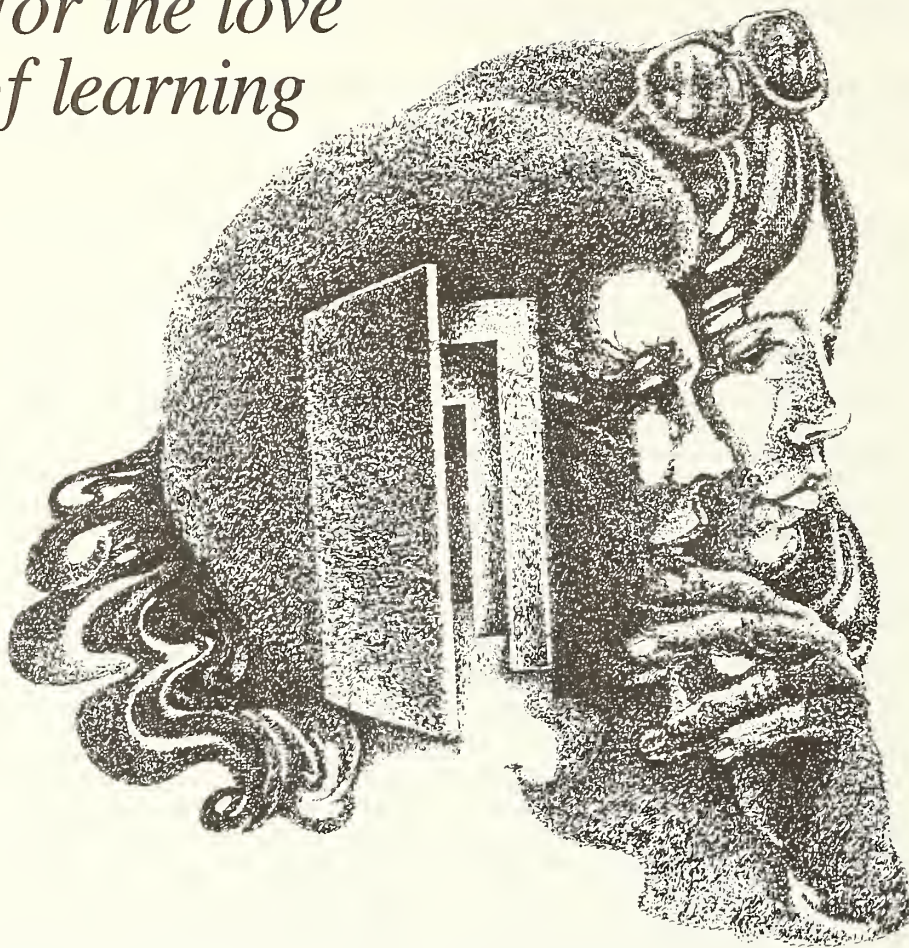
Other members are the acting CPS dean, Prof. Rod Gentry, and the chairs of the college's four departments — Profs. Jay Majithia, Computing and Information Science; Nigel Bunce, interim chair, Chemistry and Biochemistry; Bill Smith, Mathematics and Statistics; and Robin Ollerhead, Physics. ○



Attending the November meeting of the College of Physical Science advisory council were: front row, left to right, President Burt Matthews, Dr. Jack MacDonald, Dr. William Smith, Alex Curran, Dr. Gordon MacNabb, Prof. Robin Ollerhead, Prof. Jay Majithia, Dr. Keith Ingold and Prof. Ed Janzen. Back row, left to right, Dr. Allen Krantz, Dr. William Cochrane, acting CPS dean Rod Gentry, George Sekely, Dr. James Parr and Prof. Nigel Bunce. Unable to attend were Jay Ingram and Dr. Martin Smith.

(Photo by Herb Rauscher, Illustration Services)

For the love of learning



The *Report on Learning Objectives* approved by Senate Dec. 16 sets out and defines these learning objectives as the qualities the University of Guelph wants its graduates to possess — strengths achieved, step-by-step, through the organization and content of undergraduate academic departments. A complete copy of the report is available from the University Secretariat, Level 4, University Centre, Ext. 2114.

Literacy — is the base on which all else is predicated. The ability to read and write and, in general, to communicate properly is a fundamental intellectual tool. With it, students can learn to think clearly and to some purpose. Without it, they cannot analyse properly nor develop an independence of thought. Literacy affords a means of access to the raw material upon which the critical or creative intelligence is to be exercised. It affords a means of communication, of shaping ideas and concepts, of selecting between different or competing formulations. It is a means of instructing others.

The most basic experience in literacy given to the student should be the writing of a short expository paper, or the oral presentation of an informal report, on a prescribed topic or on a topic chosen from a restricted list.

At the next level, the student should be required to write a paper (or give a seminar) critical and analytical in its intent, on a topic of the student's devising. The ability to devise a topic, to frame its bounds, is at the same time an aspect of understanding of first-order importance.

At the highest level, there should be produced a paper, in an appropriate style, that analyses or synthesizes, argues from a hypothesis and itself

generates hypotheses; that produces knowledge, insight or understanding in the reader and manifests it on the part of the writer; that shows a breadth of understanding in drawing out implications and making connections between remote features of the domain; that, in short, demonstrates a love of learning and an intelligent creativity. This requirement may readily be met in existing senior honors-paper courses and the like.

Over the course of an undergraduate education, the level of difficulty of the material that the student can read, comprehend and use should increase. One way of securing this might be to encourage, in each discipline program where they do not now exist, reading courses requiring independent work at the 400 level.

In general, the ability to read and comprehend materials of the highest difficulty is enhanced in semester-long research-paper courses and in reading courses. Such courses also contribute to independence of thought and to depth and breadth of understanding.

In its broadest sense, the objective of literacy implies that it is desirable that the student have skill in another language, so as to be able to comprehend material of the appropriate level of sophistication in that language.

Numeracy — may be defined as the ability to use mathematics at a level and in a manner appropriate to good citizenship and to vocational fitness. Mathematics deals with quantity and form, with measurement, structures and relations, and encompasses a richer intellectual domain than just the utilitarian skills of numerical computation. It is as a mode of thinking, no less than as a collection of useful techniques, that it justifies its place in any well-rounded curriculum.

Numeracy... is an essential attribute of the informed and responsible citizen. A correct understanding of the proper use of numbers is necessary in a culture in which information routinely comes in numeric form and significant decisions of social policy often have quantification at their base. Without the ability to comprehend the use of quantitative data, and to detect instances of misuse, we may have to forgo opportunities for independent judgment.

Numeracy, more generally, enforces an accuracy and precision of procedure and thought that is valuable to all educated persons. As a mode of conceptualization, of thought, it should be part of the mental apparatus of all graduating students. Although a grasp of the nature and principles of mathematical forms of inquiry is essential to an understanding of scientific thought, it can be of benefit in other areas of intellectual activity. Opportunities for fostering numeracy exist in more disciplines than those traditionally requiring a substantial knowledge of mathematics. A recognition that numeracy in association with literacy forms the foundation of most, if not all of the other learning objectives, should result in greater exploitation of those opportunities than in their avoidance.

Sense of historical development — all disciplines have a history, an understanding of which contributes to an understanding of the place each has in contemporary society. No discipline is self-sufficient, and no discipline is autonomous. Historical development should not be narrowly construed to mean only the history of the discipline within its own limits, but efforts should be made to connect developments in the discipline to wider coeval social conditions. Students may thereby be endowed with a sense of the fundamental relativity of knowledge and understanding at any given time. This objective also comports a sense of the continuity of change (and, indeed, of discontinuities), over time.

This objective may enable the acceptance, on the part of students, of intellectual ambiguity or uncertainty; such acceptance is a mark of depth of understanding.

Global understanding — Global understanding may be associated with sense of historical development. It can be described as comprehension of the variety of political, religious, cultural, geographical, biological, environmental and historical forces in the shaping of nature and the human condition. It comports an understanding of the ways in which specific cultural, geographical or other circumstances condition the differences between nations or peoples, and an understanding of the place of a student's discipline in the international setting. Global understanding may be enhanced by a sense of historical perspective,

by breadth of understanding and by independence of thought. In its turn, it may itself contribute to these.

Moral maturity — is marked by depth and consistency of moral judgment; by recognition that any moral judgment may be fallible; that moral judgment is complex, in that moral principles, if they are to be applied to a specific case, may need to be interpreted. Moral maturity is a requirement in the person who is to apply a body of knowledge or a skill to the solution of a problem, or to the understanding of a situation, if the knowledge is not to remain abstract, the skill potential and unrealized.

Attainment of this objective is probably best realized by appropriate consideration of moral issues in context, as they arise in the course of study. In this way, a moral perspective may be shown to be inherently important to study of a body of material, and not merely something supplementary to it. (Guidelines for conducting ethical discussion in the classroom have been written by the ethics research group in the Department of Philosophy and now exist in draft form.)

Esthetic maturity — may be described as a quality of the critical response to some object, natural or artificial, external to the self. Or it may be a process of creation and development of self.

In the former case, esthetic maturity may be attained by a sufficient exposure, not necessarily in courses alone, to works of art (inclusive of music, literature and drama) and to the critical traditions concerning them. Such maturity may also be directed at esthetic valuing of features of the natural environment.

In the latter case, attainment of the quality will require an active involvement in the work of creation itself. A different order of esthetic maturity may be attained by practice of that form of manipulation and recreation of the original object known as criticism (as distinct from appreciation).

Viewed this way, esthetic maturity has a certain resemblance to both independence of thought and depth of understanding, in requiring an active creativity.

Esthetic maturity need not be divorced from the specific character of individual disciplines. By possession and exercise of esthetic maturity, students may be brought to appreciate the order, elegance and harmony not only of the subject matter, but also of the procedures, of the discipline.

Understanding of forms of inquiry — Inquiry, the search for truth, information, knowledge and understanding, follows a methodology based upon systematic study, reflection, intuition and innate creativity. Inquiry involves resolving an identified problem, collecting relevant information, evaluating the information and observing relationships in order to reach a conclusion. The student is the active inquirer and must be able to undertake the process independently. Scientific method represents a form of inquiry concerned with hypotheses development, data collection, analyses and interpretation. Just as an understanding of scientific inquiry is necessary for the educated citizen functioning in the midst of the technologies of the contemporary world, so, too, an appreciation of other modes of inquiry

is an essential characteristic of an educated citizen. Graduates should be familiar with the modes of inquiry used, for example, by historians, by philosophers and by scholars concerned with the various fields of creative expression.

As outcomes of this objective, students will understand the strengths and limitations of the various forms of inquiry, and the cultural, intellectual and historic impact of these forms. The student will be able to describe similarities and differences among the inquiry methods of the physical scientist, the biological scientist, the social scientist and the scholar of the humanities.

Depth and breadth of understanding — Breadth of understanding is an expression of the ability to operate across disciplinary boundaries in a coherent and productive way, with principles drawn from different disciplines. Depth of understanding depends upon mastery of a body of knowledge, but it is not to be confused with knowledge, and is not necessarily commensurate with the number of courses taken in a subject.

Depth and breadth of understanding depend upon, and themselves contribute to, independence of thought; they also contribute to a love of learning. Possession of a historical perspective may be essential to a broad and deep understanding of the subject.

At the lowest level of experience, in courses introductory to a subject, students might be shown how sets of facts may be related to others both laterally and vertically (or hierarchically). The outcome of this might be simply consciousness, on the part of the student, of the possibilities of understanding, as distinct from simply knowing.

The next higher level moves from demonstration to the student of interrelationships to the development of the student's own ability to create interrelations. The experience provided will develop a creative imaginativeness skillfully exercised on a body of material mastered in some detail. But the experience, like that provided for independence of thought, goes beyond display of erudition, and requires alert curiosity and a refusal to be content with mere assemblage of data. At this level, the student should be expected to integrate knowledge and modes of interpretation and comprehension from different disciplines, so as to generate a new understanding.

The highest level takes the student to the ability to deal in abstractions, to generate abstractions.

In general, depth and breadth of understanding are characterized by the ability to recognize the implications of the information at hand and to put it into a broader context, and by the ability to draw on different disciplines to provide a clearer and deeper understanding of the discipline with which the student is immediately concerned.

These outcomes might be assessed in a piece of written work such as an independent research paper, in the design of an experiment, in the identification and solution of a problem, or in a work of esthetic creation.

Independence of thought — At the lowest level, students are shown the possibilities of independent thinking by an instructor who, in

the classroom and elsewhere, challenges orthodoxies and criticizes received opinions. The experience provided is that of imitation or emulation of a role model. At this level, the outcome might be no more than a receptivity, on the part of the student, to critical thinking and an openness to reasoned skepticism about the authority of the expert.

At a higher level, students become actively engaged in learning and thinking. At this level, they should be given the opportunity, in seminars, tutorials, or structured small-group discussions, to offer their own challenges. The bases for such challenges may be unformed, and so the challenges themselves will be open to challenge. As students become more independent in thought, they are better able to combine ideas and to generate new ideas.

At the highest level, independence of thought is a manifestation of love of learning, and it may contribute to a sense of self-worth and of well-being. At this level, opportunities are provided for self-directed learning. One accomplishment may be the ability to ask the right kinds of questions, rather than the ability always to have answers.

Love of learning — is perhaps the quality that activates all other qualities that are the focus of learning objectives. Its expression is not easily separable from demonstration of other virtues. Thus, the true lover of learning will demonstrate both independence of thought and depth of understanding. As a consequence, setting an objective for love of learning comports also setting an objective for other qualities as well. But love of learning is not exhausted by (e.g.) independence of thought.

Love of learning may be reflected in, or expressed in terms of, intellectual curiosity — the ability (as in independence of thought) to ask useful kinds of questions (rather than the ability always to have answers); the ability to see far-reaching implications; the ability to make connections between disparate topics; energy and passion in the pursuit of knowledge and understanding; dissatisfaction with simply accumulating facts or data; and critical ability.

Testing and instruction must minimize rote-learning, and so far as possible give scope for the exercise of individual patterns of learning and individual interests.

Love of learning may be impeded by the demands of frequent evaluation of students' performance. The time frames imposed at an institutional level to provide an organizational framework for the university experience may also impair love of learning.

Love of learning may best be enhanced by the provision of opportunities for the student's personal involvement in learning. Such opportunities are perhaps best furnished in independent research projects initiated by the student. In such autonomous, but supervised study the student can not only engage with the conflicting view of published authorities, but also see in action, close at hand, the supervisor's love of learning.

In courses of formal instruction, the use of team teaching might help encourage a student's own love of learning, especially if members of the teaching team take an appropriate role as "students," and if true dialogue is developed between the teachers. ○

Math and Stats Clinic tackles GM problem

When your robot has a breakdown . . .

Robots have become an integral, efficient part of modern technology. They produce everything from toothpaste to car bodies. But nothing is perfect, and the programming of these machines is constantly being improved.

At its plant in Oshawa, General Motors of Canada Ltd. uses robots to produce 480,000 vehicles each year. These two- and four-door sedans and station wagons roll off two assembly lines at the rate of 125 an hour, at the "hands" of 140 robots.

Faculty in the Mathematics and Statistics Clinic are developing a model to determine ways of optimizing the production process in an automated plant. Prof. Bob Chapman, who has been involved in the clinic since its formation in 1981, says it acts as a consultant to business and industry and provides practical workplace experience for students. Three other faculty who have been much involved are Profs. Bill Smith, chairman of Mathematics and Statistics, Rod Gentry, acting dean of the College of Physical Science, and Brian Allen. There are currently 12 undergraduate and graduate students and two faculty members working on the GM project.

Computer model

Chapman says there are 47 million different possibilities for robotic action in one GM automated system that produces automobile side panels for Oldsmobile and Pontiac station wagons and two- and four-door models. The mathematicians have built a computer model

of the automated system. Using a simulated schedule based on a sample ordering of 80 per cent four-door sedans, 10 per cent two-doors and 10 per cent station wagons, they are now trying to determine whether given stations should be speeded up or work moved from one station to another for optimal production.

Like people under stress, hard-worked robots break down. When one stops working, the whole line grinds to a halt. If the machines are speeded up, they break down even more often. But Chapman says it is possible the increased production offsets the breakdowns. This is one of the problems the Guelph group is working on. They are also trying to determine where the company can best spend its maintenance dollars for the most cost-effective results.

The clinic has a large pool of talented statisticians and applied mathematicians to call on for situations of this kind, a feature that makes it attractive to industry. Orest Storoshchuk, a systems engineer at GM, says the University has shown a willingness to try to solve industrial problems and to commit faculty resources. Storoshchuk says that in these tight economic times, it is hard to get engineers to work on theoretical projects. But government tax incentives for research and development make it appealing to call on universities because they are geared to research, he says.

The clinic not only provides a service to industry, adds Chapman, it also gives undergraduates a chance to work in the real world. ○

Letter to the Editor

Pet costs

Just a brief note to thank you for your "assistance" in the Dec. 11, 1986, at *Guelph* ("Christmas pet is a long-term investment"). We were delighted to see the comments by Dr. Wayne McDonell expressing the same concerns that all of us in the animal welfare movement keep making year in and year out.

The issue of what it costs to maintain a pet is frequently overlooked when, on the spur of the moment, the decision is made to "buy a cute puppy." Thanks for your help.

James H. Bandow,
Executive Director,
The Canadian Federation
of Humane Societies, Ottawa.

Personals

For Sale: New continental double Simmons super postureguard box spring and mattress, 843-3559. White and red Mercury Zephyr, four-door, 824-0275. White portable sewing machine; woman's full-length leather coat, size 10; large sewing table, 658-5408, after 5 p.m.

Wanted: Small ultrasonic cleaner, Ext. 3426 or 822-7880.

"Personals" is a free service offered by at Guelph for staff, faculty and students at the University. All items must be typed, double spaced, and submitted to at Guelph one week before publication.



Members of the 1986/87 board of directors of the Faculty Club are: seated, left to right: Prof. Sam Sidlofsky, Sociology & Anthropology, vice-president; Prof. Bruce Forster, Economics, president; Bob Davis, Engineering Services, treasurer; and Prof. Susan Pfeiffer, Human Biology. Back row, left to right, Prof. John Burton, Animal & Poultry Science, secretary; Prof. Stefan Straka, History, counsel; Prof. Kari Grimstad, Languages and Literatures, membership; Prof. Bruce Wilkie, Veterinary Microbiology and Immunology; Prof. Trevor Smith, Nutrition, University Centre board representative; Geoffrey Byford, Safety & Security; Prof. Ken Mullen, Mathematics and Statistics; and David Overton, club manager.

(Photo by Herb Rauscher, Illustration Services).

Four new awards, two bursaries

Four new awards and two new bursaries received Senate's approval Dec. 16. They are:

The Canadian Hospitality Foundation/Ontario Chinese Restaurant Association Award — an annual award of \$600 to an undergraduate student who is a permanent resident of Ontario registered in Semester 7 of the B.Comm. program. The student must have a cumulative average of at least 70 per cent and have significant food service work experience. This award is tenable with other Senate awards at the discretion of the B.Comm. awards subcommittee, which will serve as the selection committee. Application must be made by Oct. 1 to the assistant registrar, awards. The donor is the Canadian Hospitality Foundation/Ontario Chinese Restaurant Association.

International Olympiad Entrance Award — an annual award of \$4,000 to a student entering a chemistry, mathematics or physics program who has achieved a certificate of merit or a medal in the International or Canadian Chemistry, Mathematics or Physics Olympiad. The award is payable in annual instalments of \$1,000, provided a minimum 'B' average is maintained. The assistant registrar, awards, will invite application from eligible candidates, and the selection committee is the College of Physical Science awards committee. The donor is CPS.

White Rose Nurseries Co-operative Education Scholarships — two annual undergraduate awards of \$2,000 a year, tenable with other Senate awards, to students majoring in horticultural science who have an interest in and aptitude for plant propagation and commercial nursery/ plant production, and who are accepted into the co-operative education program. Students maintaining a 'B' standing in their academic work and satisfactory standing in their work term will continue to receive \$1,000 in each of semesters 5 to 8 to a maximum total award of \$6,000 for each student. Application is not necessary, and the selection committee is the OAC awards committee on recommendation of the college co-op co-ordinator. The donor is White Rose Nurseries, Unionville.

Jack Pos Award in Agricultural Mechanization — an annual award of \$100, tenable with other Senate awards, to an undergraduate student in agricultural mechanization major of the

B.Sc.(Agr.) program. Equal weight will be given to academic standing and to participation in extracurricular activities, especially those associated with agricultural mechanization. A minimum of 'B' standing is required. Application must be made to the assistant registrar, awards, by April 1. The selection committee is the OAC awards committee on recommendation of the School of Engineering. The donor is the Agricultural Mechanization Club.

Brian and Cathy Berg Memorial Bursary — an annual award of \$250, tenable with other Senate awards, to a full-time undergraduate student registered in the College of Biological Science with demonstrated financial need. Application must be made to the assistant registrar, awards, and the selection will be made by the University Bursary Committee. The donors are the families of Brian and Cathy Berg.

The Credit Valley Conservation Authority Foundation — an annual award of \$200, tenable with other Senate awards, to a full-time student registered in the BA program (geography), the B.Sc. program (geography), the B.Sc.(Eng.) program (water resource engineering) or the B.Sc.(Agr.) program (resources management or resource economics) with demonstrated financial need. The student must reside in a member-municipality of the Credit Valley Conservation Authority Foundation. Application must be made to the assistant registrar, awards, by Sept. 30, and the selection committee is the University Bursary Committee. The donor is the Credit Valley Conservation Authority Foundation. ○

Appointments

Prof. Louis Christofides became chairman of the Department of Economics Jan. 1 for a five-year term.

Prof. Gerald Neufeld has been appointed lecturer in the Department of Music in a new position.

Prof. Turlough Finan, department of biology, McMaster University, was appointed adjunct professor in the Department of Microbiology for a one-year term that began Jan. 1. ○

Godry to play in Shriner Bowl

Guelph football lineman Lou Godry has been selected to play in the Jan. 10 Shriner Bowl at Stanford University in Palo Alto, Calif. Only the fifth Canadian to be so honored, Godry was nominated by the Canadian Interuniversity Athletic Union, which this year awarded him the J.P. Metras Award as top offensive lineman.

Joining Godry in California will be another Canadian lineman from the University of British Columbia. They will team up with the best senior football players from eastern U.S. colleges in a game against top senior players from the west, and will gather three days before the game for organized practice, says Dick Freeman, Athletics Department. At 6'2" and 275 pounds, Godry should make an imposing figure during the televised game, he says.

Prof. Brian Woodrow, acting chairman, Political Studies, where Godry is a fourth-year student, says Godry is a good example of a student who can successfully combine the pressures of top athletic performance with the demands of a full academic load. ○

Computing Services offers seminars

Computing Services is offering another series of seminars for campus computer users this semester. The seminars are all free, and will be held in Room 212 of the ICS building.

During January, the following two-hour seminars are being offered: "Mainframe" — Jan. 19 at 9 a.m., to be repeated Jan. 26 at 7 p.m.; "Microcomputer" — Jan. 20 at 9 a.m. and Jan. 27 at 7 p.m.; "Communications" — Jan. 21 at 10 a.m. and Jan. 28 at 7 p.m.; "IBM PC Disk Operating System" — Jan. 19 at 11 a.m. and Feb. 2 at 3 p.m.; "IBM PC Data Management" — Jan. 20 at 11 a.m. and Feb. 3 at 3 p.m.; "Expert Systems" — Jan. 19 at 1 p.m. and Jan. 26 at 10 a.m.; "Scientific Computing" — Jan. 20 at 1 p.m. and Jan. 27 at 10 a.m.; and "Marks/Test Scoring" — Jan. 13 at 1:30 p.m. and Jan. 15 at 1:30 p.m.

Registration for the seminars begins Jan. 12 in Room 204, ICS building, or telephone Ext. 8888. Information on seminars later in the semester will appear in *at Guelph*, on CoSy and on TCoSy in the COMPSEVNOTES open conferences. ○

Briefly

THE GUELPH FIELD NATURALISTS meet Jan. 8 at 7:45 p.m. at the Arboretum Centre, for a multi-media presentation on the natural history of the rain forests of Costa Rica by Ronald Ridout, former president of the Ontario Field Ornithologists. Some 10 per cent of Costa Rica's land has been set aside as national park — mostly in the mountaintops in rain and cloud forests. Using slides, tape-recordings of jungle sounds, and background music from the Andes, Ridout will show the birds, mammals, reptiles, insects and plants that inhabit these areas, as well as scenes from a seldom-visited watershed called Penase Blancas that is being threatened by development.

THE 17TH ANNUAL HUMAN KINETICS SYMPOSIUM, sponsored by third-year students of Human Kinetics, has the theme "Hurdles to Health - Health Issues for Children." Topics include cranio-facial reconstructive surgery, head and neck prosthetics, common athletic injuries in children, hospitalization and serious illness in children, canoe tripping with physically disabled boys and eating disorders. Guest

speakers include staff from Toronto's Hospital for Sick Children and the Aids for Living Centre, Sunnybrook Hospital. It will be held Jan. 24 from 9 a.m. to 5 p.m. in Room 105, MacNaughton Physical Sciences building. The School of Human Biology dinner and dance will be held that evening at 7 p.m. at the Cutten Club. Tickets for the symposium, available at the University Centre box office or from third-year students, are \$9, which includes lunch and wine and cheese. Dinner dance tickets are \$18. Symposium tickets are available at the door for \$11. For more information, call Helen Sharp, 763-5127.

THE ONTARIO HORSE BREEDERS' ASSOCIATION presents its 1987 conference on marketing Jan. 17 from 9:30 a.m. to 4 p.m. in War Memorial Hall. Conference speakers include Wolf Krober, Equitanna Trade Fair, Germany, Dermot Mark, Ontario Ministry of Agriculture and Food market development branch, and Clare Rennie, assistant deputy minister, OMAF. For information or tickets, call 821-9138 or 416-389-8562.

Next Week at Guelph

THURSDAY, Jan. 8, 1987

Sign-up - COLLEGE ROYAL BEARD-GROWING CONTEST, 9 a.m. to 4 p.m., UC courtyard.

Agricultural Conferences - MOLDY CORN, 10 a.m. to noon; WHITE BEANS; AGROMETEOROLOGY, 1 to 3:30 p.m.; the Canadian Legion, York Road.

Dance - WELCOME BACK PARTY, 8 p.m., PCH, sponsored by the University Centre.

FRIDAY, Jan. 9, 1987

Film - FIX, 8 p.m., MacN 105, \$2.50.

SUNDAY, Jan. 11, 1987

Seminar - CURED MEAT, 8 a.m. to 4 p.m., AS 156.

Worship - ROMAN CATHOLIC MASS, 10:10 a.m., PCH; ECUMENICAL CAMPUS MINISTRY (Anglican, Presbyterian, United), 10:30 a.m., Chapel, UC Level 5.

Briefly

THE SURPLUS SALES DEPARTMENT has the following items available for public purchase: Digital Decwriter II, 44079, SD 036; aluminum tiered seating, SD 044; three Motorola metrx pagers, SD 060; Lectro truck, battery-operated, model 60H.D, SD 093. For information and viewing, contact the office at Ext. 8139.

THE INTERNATIONAL CONFERENCE ON URBAN SHELTER in Developing Countries scheduled for London, England, Sept. 1 to 4 is calling for papers. Sponsored by the International Centre for Technical Research, the conference is directed at dealing with the growing problem of overcrowding and inadequate resources in developing countries. It will be of interest to academics, administrators, bankers, economists, engineers, infrastructure development specialists, planners, research workers and decision makers. Block reservations for accommodations have been obtained at reasonable prices. For more information, contact Susan James, Development Education Program, Centre for International Programs, Ext. 6914.

RESIDENCE STUDENTS and residence life staff helped make the holiday season brighter for many others with their generous giving. Lambton Hall held a bottle drive in November and raised \$1,080 that was donated to the Sertoma Club. The club, along with CJOY radio station, operates the Children's Christmas Wish. East Residences held its second annual canned goods blitz and forwarded 625 cans of food and \$25 to the Salvation Army Christmas Drive for hampers that go to needy families in the community. Schooner 3 and Watson Hall residents went Christmas carolling at Guelph General Hospital; a house in Maritime Hall donated its house money to Rick Hansen, Man in Motion Tour; and in Prairie Hall, residents collected more than \$1,000 to donate to Christmas baskets for less fortunate families in Guelph.

RELAXATION CLASSES are being offered by the Relaxation and Biofeedback Clinic in the School of Human Biology. The 10 group relaxation sessions and two follow-up sessions begin Feb. 2, meeting Mondays and Thursdays from 7:30 to 8:30 p.m. Cost is \$80; anyone with a medical condition should check with their doctor before enrolling.

A TEST SCORING AND MARKS SEMINAR, introducing the new version, is being offered Jan. 13 and again Jan. 15, from 1:30 to 3:30 p.m. in Room 212, ICS building. The new versions will be the operational versions beginning this semester. The old Sharp APL versions, using the 2501 OMR card reader, will not be available. The seminars will focus on the new input medium, environment and system modifications; the Scan-Tron page reader; the multiple-choice answer form for test scoring; accessing APL*PLUS and obtaining student names from the Registrar's file. Register for either seminar by signing the sheets posted in the corridor across from Room 203, ICS.

Sunday Afternoon Walk - WINTER, 2 p.m., J.C. Taylor Nature Centre. Centre.

International Cinema - THE GODS MUST BE CRAZY (South Africa), 8 p.m., MacN 105, \$2.

MONDAY, Jan. 12, 1987

Worship - ROMAN CATHOLIC MASS, 12:10 p.m., Chapel, UC Level 5.

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301.

TUESDAY, Jan. 13, 1987

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301; WRITING ASSISTANCE, 5:30 to 9 p.m., Lib 359; STUDY SKILLS WORKSHOP, 7 p.m., register at Connection Desk, Level 3, UC, by 4:30 p.m.

Worship - ECUMENICAL CAMPUS MINISTRY, Know Your Bible, noon, UC 444; ROMAN CATHOLIC MASS, 12:10 p.m., Chapel, UC Level 5.

WEDNESDAY, Jan. 14, 1987

Concert - TORONTO INDEPENDENT DANCE ENTERPRISES, noon, UC courtyard.

Worship - ECUMENICAL CAMPUS MINISTRY, Holy Communion, 12:10 p.m., Chapel, UC Level 5.

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301; WRITING ASSISTANCE, 5:30 to 9 p.m., Lib 359.

THURSDAY, Jan. 15, 1987

Worship - ECUMENICAL CAMPUS MINISTRY, Fellowship and Conversation, noon to 2 p.m., PCH; COMMUNITY EVENING, 5 to 6:30 p.m., Older Than Average Students' Lounge, UC Level 5.

Dance - BOWSER AND BLUE, 8 p.m., PCH, sponsored by the University Centre.

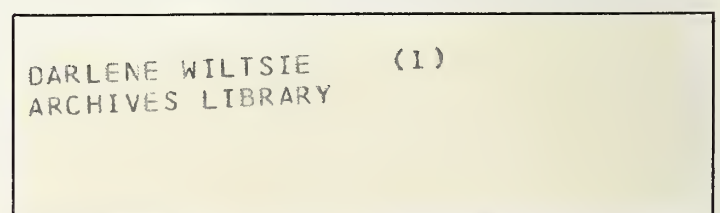
The following abbreviations are used in *at Guelph*: AC=Athletics Centre; ANNU=Animal Science Nutrition; APS=Animal and Poultry Science; BG&Z=Botany-Genetics-Zoology; CM=Chemistry-Microbiology; CS=Crop Science; CSRC=Counselling and Student Resource Centre; Eng=Albert A. Thornbrough building; FS=Food Science; HAFA=Macdonald Stewart Hall (Hotel & Food Administration); HB=Human Biology; Hort=Horticultural Science; ICS=Institute of Computer Science; JH=Johnston Hall; LA=Landscape Architecture; L/A=Lennox/Addington; Lib=McLaughlin Library; LRS=Land Resource Science; Mac=Macdonald Hall; MacK=MacKinnon building; MacN=MacNaughton building; PCH=Peter Clark Hall; UC=University Centre; WMH=War Memorial Hall.



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Inside this issue: INFOSERVE — a guide to the information services at the University of Guelph Library. This is a paid supplement published at the request of the Library. ○

Senate to see information technology plan

A strategic plan for information technology at Guelph goes to Senate for information Jan. 20. Written by Margaret Beckman, executive director for information technology, for the Senate Committee for Information Technology (SCIT), the report will be presented to the academic governing body by Prof. Jimmy Law, chairman of SCIT.

Information Technology: Strategic Plan was approved by SCIT at its November meeting. Discussed by the President's Advisory Committee in May, the plan was then revised and sent out to Information Technology (IT) committees in each college and directorate for discussion and comment before SCIT gave its final approval.

The report outlines the goals for information technology and the actions taken to achieve those goals since Senate endorsed the direction in April 1984. It also sets out plans for an educational network to give students on- or off-campus access to a variety of services, programs and information; research on the impact of information technologies; and administrative or management systems.

Other business

Senators will also be asked to consider a new time for meetings. Senate normally meets at 5 p.m. when there is a short agenda, and at 8 p.m. when a full evening of business is expected. The Senate executive committee is proposing that evening meetings be moved to 7 p.m., says Barbara Abercrombie, University Secretary.

Board of Undergraduate Studies will seek approval for first-year students to enter directly into co-op programs, instead of in third or fourth semester. Abercrombie says the change is to make the co-op programs more attractive to high school students. Students will need a 70-per-cent average in Grade 13 to be admitted into a co-op program.

Board of Graduate Studies (BGS) will seek approval of: editorial changes to the 1987/88 *Graduate Calendar*; a change to master's examination regulations to permit greater flexibility in the choice of the fourth examiner; additions to graduate and associated graduate faculty; and the list of graduands for winter convocation Feb. 6.

BGS will also recommend to Senate that an annual meeting of graduate faculty be added to the academic schedule in the *Graduate Calendar*. BGS says a meeting held Nov. 12 met a real need for graduate faculty to communicate in a University-wide forum on graduate education concerns, and BGS wants the meeting

on an annual basis during the second week of November.

Board of Studies for the Associate Diploma in Agriculture will ask Senate to approve the program's list of graduands for winter

convocation, and seek Senate's approval for the establishment of a dean's honors list for the program. Criteria for qualification are those approved by Senate in December 1985: a full-

(Continued on page 2.)

All in a day's work for *The Campaign*



Marjorie Millar, director of Alumni Affairs and Development, presents Prof. Gord Bowman, Animal and Poultry Science, with the original framed photograph of himself and a group of pigs used in a double-page advertisement in *Hog Marketing Quarterly*. The ad was designed to promote *The Campaign*.

(Photo by Herb Rauscher, Illustration Services)

The Ontario Pork Producers Marketing Board purchased a double-page spread in the winter issue of *Hog Marketing Quarterly* so the University could bring its capital campaign message to the agricultural community, particularly the pork producers.

The photograph accompanying the ad features Prof. Gord Bowman, Animal and Poultry Science, in a pen surrounded by several pigs. Bowman sat crouched in the pig pen for half an hour, enduring pushes, shoves, bites and numerous bruises before the perfect picture was achieved.

In appreciation, Marjorie Millar, director of Alumni Affairs and Development, recently

presented the original framed photograph for the ad to Bowman.

The Ontario Milk Marketing Board and the Ontario Cattlemen's Association have also agreed to sponsor advertisements in dairy and beef industry publications in support of *The Campaign*, and Alumni Affairs and Development is now planning the photographs and copy for those ads, says development officer Marilyn Robinson.

As with the advertisement in *Hog Marketing Quarterly*, the ads will emphasize the University's contributions to those industries and seek donations to *The Campaign*, says Robinson. ○

London interdisciplinary course accepting students

Plans for the six-week London interdisciplinary course 65-311, "The Modern Commonwealth: The Canadian Connection," are now being finalized, says Prof. Doug Killam, chairman of the Department of English Language and Literature. Killam, who is offering the course from May 5 to June 12, was in London for a week in early January confirming the participation of various London-based specialists in Commonwealth affairs. Classes will be based in the Commonwealth Institute on High Street, Kensington, but will use the resources of the British Library, the Royal Commonwealth Society, the Commonwealth Institute and the School of Oriental and African Studies.

The course is designed to acquaint students with the modern Commonwealth, both as a formal international association of states and as an unofficial association of Commonwealth participating agencies. Topics to be explored include history, politics, economics, literature, music, theatre and fine art, information and the media, and education. Special interests of students such as industry and commerce, international understanding, law and parliament, science and technology, social welfare

and human rights, or sports and leisure can be accommodated, Killam says.

The course is limited to 20 students, and already nine have registered. Applications are being processed in the order they are received; to be eligible students must have completed at least Semester 2 by September 1986. Preference is given to students with an average of 70 per cent or more, but all applications will be considered. Students wishing to take an additional course can arrange for an independent study course with a faculty member at the University or enrol in a distance education course.

Accommodation for some students is available at London House, 105 Albert St., London. Students who use the residence will be able to move in on April 30 and stay until the morning of June 16; the residence cost is \$399.50.

Some bursaries are available and interested students can obtain information about these and other aspects of the program from BA counsellor Nancy Clendenning, Room 052, MacKinnon building, or from Killam, Room 426, MacKinnon building. ○

Job opportunities

As of *at Guelph* deadline Jan. 9, 1987, the following opportunities were available:

Technician, Pathology Department; part-time, grant position. Salary commensurate with qualifications and experience.

Stenographer, English Department; grant position. Salary: \$8 per hour.

Technician, Animal and Poultry Science; grant position. Hiring range: \$291.19 to \$315.46.

Secretary, Gerontology Research Centre; temporary full-time, beginning Jan. 19 for about six weeks. Hiring range: \$282.66 to \$304.84.

The following positions were available to on-campus employees only:

Unit Manager, Food Services. Salary range: \$487.77 minimum; \$532.12 job rate (level 5); \$645.49 maximum.

Library Assistant 1, Track 2, Circulation/Reserve, Library. Salary range: \$247.17 minimum; \$286.72 job rate (level 5); \$355.34 maximum.

Senior Residence Clerk, Residences Department. Salary range: \$291.19 minimum; \$336.53 job rate (level 5); \$419.16 maximum.

Secretary, Physics Department. Salary range: \$282.66 minimum; \$322.58 job rate (level 5); \$397.36 maximum.

Agricultural Assistant, Elora Dairy Cattle Research Centre, Department of Animal and Poultry Science. Salary range: \$437.96 start rate; \$459.29 six-month rate; \$480.65 one-year rate.

Technician, Zoology. Salary range: \$397.77 minimum; \$460.01 job rate (level 5); \$570.62 maximum.

Executive Secretary II, Office of the Vice-President, Academic. Salary range: \$376.40 minimum; \$435.29 job rate (level 5); \$539.69 maximum.

Technician, Crop Science Department. Salary range: \$461.65 minimum; \$534.73 job rate (level 5); \$664.21 maximum.

Secretary, Family Studies Department. Salary range: \$282.66 minimum; \$322.58 job rate (level 5); \$397.36 maximum.

It is the University's policy to give prior consideration to on-campus applicants. To determine the availability of University employment opportunities, contact employment services and training, Level 5, University Centre, or telephone 836-4900.

IT *Continued from page 1.*

time student must attain an 80-per-cent semester average; a part-time student, 80-per-cent cumulative average in at least five courses taken in sequential part-time semesters. The honor will be noted on a student's transcript.

The Research Board will seek approval for a motion to add an alumni member to its membership, and the Committee on Graduation and Ceremonials will ask senators to vote on two nominations for the Medal of Merit and a candidate for professor emeritus. The Medal of Merit, approved by Senate in March 1986, recognizes retired faculty who have made outstanding contributions to the University.

Senate meets at 8 p.m. in Room 113, MacNaughton Physical Sciences building. ○

Appointments

Prof. Keith Ronald, Department of Zoology, will become director of the Arboretum Feb. 1. The half-time appointment is for five years.

The Department of Horticultural Science has learned of a new chairman. Prof. John Thompson, department of biology, University of Waterloo, will assume responsibilities in the fall for a five-year term.

Dr. Ken MacKay, associate director, Institutional Analysis and Planning, has been appointed assistant executive director for information technology.

Ron Elmslie is acting director of Computing Services until a new director is named. Ted Dodds is acting assistant director, systems development and co-ordination, CS, and Phil Jones is acting manager, support group, CS.

Gerald Neufeld has been appointed lecturer in the Department of Music. The appointment was effective Jan. 1. Neufeld is a specialist in choral music. ○

Director sought for Associate Diploma in Agriculture Program

Notice from dean's office, OAC

A director is being sought for the Associate Diploma in Agriculture Program for July 1 to succeed Prof. Neal Stoskopf, who has completed 10 years in the position.

The program, offered at the University under contract with the Ontario Ministry of Agriculture and Food, has an annual enrolment of about 320 students.

The director works with units within the university, with OMAF and with the five OMAF-supported colleges of agricultural technology in Ontario. The new director will be responsible for all aspects of the program — course offerings, schedule of study, student counselling, liaison with OMAF in budget and management, and high school student recruitment — will have an appointment in an academic unit and will have teaching and research responsibilities.

The director is expected to have an advanced degree in an area of agriculture, education or rural development, experience in teaching and preferably experience in administration and public relations.

Applicants must be employed at the University or with OMAF. The term is for five years and there is an option to renew for a second five-year appointment. Inquiries, applications and nominations should reach OAC Dean Freeman McEwen by March 2. ○

Correction

Dr. Brenda Bonnett will become assistant professor in the Department of Microbiology and Immunology July 1, 1987 — not 1986, as reported in the Dec. 18 issue of *at Guelph*. ○

ROBERT WIENS AND TONY URQUHART are the two artists selected as finalists from the 10 semi-finalists in the \$35,000 national sculpture competition offered by the Macdonald Stewart Art Centre. They will be presenting more detailed submissions for the jury, and the commission will be awarded in late January. This commission is sponsored by Imperial Tobacco Ltd., with assistance from the Canada Council Art Bank. It has also received support from the Ontario government through the Ministry of Citizenship and Culture.

RELAXATION CLASSES are being offered by the Relaxation and Biofeedback Clinic in the School of Human Biology beginning Feb. 2. The program includes 10 group relaxation sessions and two follow-up sessions. They meet Mondays and Thursdays, from 7:30 p.m. to 8:30 p.m. Cost is \$80 and registration is Jan. 26 at 7:30 p.m. in Room 209, Human Biology. Those with a medical condition should check with their doctor before enrolling. For further information, call Ext. 2662.

THE OPENING CONCERT of the Department of Music's Thursday Noon Hour Series Jan. 22 features Le Trio de Montreal with Guy Fouquet, cello, Berta Rosenohl-Grinhauz, piano, and Luis Grinhauz, violin. Fouquet is principal cellist with the Orchestre symphonique de Montreal and also performs regularly with the CBC orchestra. He obtained a first prize in cello and chamber music from the Montreal Conservatory of Music and studied at the Conservatoire de Paris. Rosenohl-Grinhauz studied at Indiana University and has appeared several times as soloist with McGill Chamber Orchestra, the Montreal Pro Arte Orchestra and the Sherbrooke University Chamber Orchestra. She is frequently heard on CBC radio. Grinhauz won the State Conservatory Gold Medal in his native Argentina and received the Performer's Diploma at Indiana University, where he became assistant professor. He is assistant concertmaster of the Montreal Symphony Orchestra and concertmaster with the Pro Arte Orchestra de Montreal. Program I at 12:10 p.m. in Room 107, MacKinnon building, will consist of "Trio No. 1" by Alexis Contant. Program II at 1:10 p.m. will feature "Trio in B Flat in Major Op. 21" by Anton Dvorak.

THE GUELPH FIELD NATURALISTS CLUB holds meetings at the Arboretum Centre Thursdays at 7:45 p.m. Topics for the winter program include "Nature through the Seasons" Feb. 12, "Reptiles and Amphibians of Ontario" Mar. 12 and "Wildflower Gardening" Apr. 9. The outdoor meetings include "The Great Escape on Snowshoes" Jan. 31, "Cross-Country Skiing" Feb. 14, "Annual Robin Hike" Mar. 14, "Owl Prowl" Apr. 10 and "Waterfowl Watch" Apr. 11. For details on the club's young naturalists program, call 822-0777.

THE BOARD OF GOVERNORS meeting tentatively scheduled for Jan. 22 has been cancelled. The next regularly scheduled meeting will be Mar. 26. Material for inclusion in the agenda should reach the University Secretariat by Mar. 16. Forty copies on three-hole punched paper are required. The April 23 meeting, previously listed as tentative, will be held.

CURRENT ISSUES IN AGRICULTURE is a series of informal seminars organized by the graduate students in the Department of Crop Science. The seminars will be given by faculty, visiting professors and guests from government and agribusiness. Planned on a biweekly basis, they will be held Fridays at 3 p.m. in Room 121, Crop Science building. The first seminar Jan. 16 is "Wild Rice Breeding and Management" with Patrick Hayes, Oregon State University. For more details, call Ext. 8194.

A DISTINGUISHED VISITING PROFESSOR in the School of Landscape Architecture, Julius Gy. Fabos, will give a public lecture, "Computerization of Spatial Data: Its Potential Effect on Landscape/Land Use Planning Decision Making," Jan. 29 at 7:45 p.m. in Room 149, Macdonald Hall. Fabos is with the department of landscape architecture and regional planning, University of Massachusetts at Amherst.

THE BIG BROTHERS ASSOCIATION of Guelph and Wellington County is holding its 19th annual dinner Jan. 22 at 6:30 p.m. at the Italian Canadian Club, 135 Ferguson St. All Big Brothers, Little Brothers and Moms, and other adults who are interested in the organization are invited. A nominal fee of \$4 per adult (except for Moms) will be charged at the door.

NOMINATIONS FOR THE 1986 TEACHING AWARDS of the Ontario Confederation of University Faculty Associations are invited from individuals, informal groups of faculty or students or both, and organizations such as faculty associations, student councils, departments, alumni, etc. A guideline to assist in organizing a nomination should be consulted by nominators and is available from the University's Faculty Association office. Deadline for nominations is March 31.

CITIZENSHIP DEVELOPMENT CLASSES, sponsored by the Guelph and District Multicultural Centre, are being offered for three Tuesdays beginning Jan. 20 from 7:30 to 9:30 p.m. at 128 Woolwich St., Suite 203. Topics include history, geography, government of Canada, rights and privileges of Canadian citizens. Preregistration is required by telephoning 836-2222; registration fee is \$10.

GWYNNE DYER LECTURES ON TERRORISM Jan. 19 at 7:30 p.m. in War Memorial Hall. Entitled "False Distinctions," his lecture will focus on the similarities among terrorists, freedom fighters and government-sponsored groups. According to Dyer, "There is no moral distinction between a government that orders fighter-bombers to attack a village—as practically every great power's government has done at some time in the past 20 years—and the terrorist organization that orders its killers to blow people up, with somewhat lower technology. They are all killing innocent people for political purposes." The lecture is sponsored by the University Centre, OPIRG and the Student Administrative Arts Council. Tickets are \$2.50 and are available at the University Centre box office, Sam the Record Man, the Bookshelf Cafe and The Corner in Stone Road Mall.

TAKING CHARGE is the title of two workshops being offered at the Counselling and Student Resource Centre. The Communication Workshop Jan. 21 from 5 to 9 p.m. covers the basic skills needed to communicate effectively in groups—presentation, listening and facilitation skills. Assertiveness Training Group, running for four weeks from 5 to 7 p.m. beginning Jan. 28, is designed to help participants learn the basics of assertive behavior and become confident communicators. Register at the Connection Desk, Level 3, University Centre.

MARCEL AYMAR, former member of the French-Canadian group CANO, performs Jan. 28 at noon in Peter Clark Hall. Aymar's style covers the gamut from the big sound of high technology and synthesizers to the simplicity of a single voice. The concert is presented by the University Centre in collaboration with La Maison Francaise, Guelph's francophone residence. Admission is free.

OVC IS OFFERING non-obligatory and non-credit evening presentations in business management to its students. They will be held Wednesdays from 7 to 9 p.m., Jan. 21 to Mar. 4, in Room 508, OVC. Three speakers will be covering different practice management issues. Bruce Karcher, a chartered accountant, handles financial and tax planning and accounting for 14 veterinary practices in southwestern Ontario and consults with practices across Ontario about issues such as the sale of a practice and the admission of partners. Drew Mitchell draws on more than 20 years of experience in the agricultural field, ranging from herdsman of a beef cow/calf operation to farm management counselling with Agriculture Canada. Workshops and seminars on problem solving and decision making now demand much of his time. Ed Rudyk, in association with Dr. Joe Connell of Kitchener, has been involved for more than 15 years in the development of communications workshops and the presentation of seminars on motivation, personnel management and the development of client relationships.

Next Week at Guelph

THURSDAY, Jan. 15, 1987

Worship - ECUMENICAL CAMPUS MINISTRY, Meet and Eat, noon to 2 p.m., PCH; COMMUNITY EVENING, 5 to 6:30 p.m., OTAS Lounge, UC Level 5.

Apiculture Club - MEAD (HONEY WINE) MAKING CONTEST, Geoff Hunter, 5:10 p.m., Graham 200.

Dance - BOWSER AND BLUE, 8 p.m., PCH, sponsored by the UC.

FRIDAY, Jan. 16, 1987

Current Issues in Agriculture - WILD RICE BREEDING AND MANAGEMENT, Patrick Hayes, 3 p.m., CS 121.

Volleyball - MEN VS. BROCK; WOMEN VS. WESTERN, 7:47 p.m., AC.

Film - 2001: A SPACE ODYSSEY, 8 p.m., MacN 105, \$2.50.

SATURDAY, Jan. 17, 1987

Arboretum - WINTER BIRD SURVEY, 8 a.m., Nature Centre.

Marketing Conference - ONTARIO HORSE BREEDERS' ASSOCIATION, 9:30 a.m. to 4:30 p.m., WMH.

Volleyball - MEN VS. ALUMNI, 7 p.m., AC.

SUNDAY, Jan. 18, 1987

Worship - ROMAN CATHOLIC MASS, 10:10 a.m., PCH; ECUMENICAL CAMPUS MINISTRY (Anglican, Presbyterian, United), 10:30 a.m., Chapel, UC Level 5.

Sunday Afternoon Walk - WINTER BIRDS, 2 p.m., Nature Centre.

International Cinema - A LOVE IN GERMANY, (West Germany), 8 p.m., MacN 105, \$2.

MONDAY, Jan. 19, 1987

CUSO - INFORMATION TABLE, 10:30 a.m. to 2:30 p.m., UC

Briefly

AN INTERDEPARTMENTAL SEMINAR SERIES IN SYSTEMATICS will be held Mondays at 4:10 p.m., usually in Room 141, Animal Science building. "Using Phylogenetic Patterns in Tests of Evolutionary Process Theories and Vice Versa" is the topic Jan. 19. Most seminar dates will be followed with an evening meeting of the informal systematics discussion group.

THE ECUMENICAL CAMPUS MINISTRY (Anglican, Presbyterian, United and Lutheran) will hold worship services Sundays at 10:30 a.m. in the Chapel, Level 5, University Centre, followed by coffee/brunch. On Wednesdays at 12:10 in the Chapel, there will be Anglican/Lutheran Rite holy communion. Other semester activities include "Community Evening," Thursdays from 5 to 6:30 p.m. in the Older than Average Students Lounge, Level 5, University Centre; "Know Your Bible," Tuesdays at noon in Room 444, University Centre; and "Meet and Eat," Thursdays from noon to 2 p.m. in Peter Clark Hall.

BIOCHEMISTRY SEMINARS are scheduled for alternate Wednesdays, from noon to 1 p.m. in Room 222, MacNaughton Physical Sciences building. "Hemicellulose Utilization by Yeasts," with Prof. Hung Lee, Environmental Biology, is the topic Jan. 28.

THE LEARNING EDGE is the title of Continuing Education's community education program for winter '87. It offers a choice of more than 50 courses, ranging from wine appreciation and calligraphy to languages and microcomputing. For more information, call Ext. 3956 or 3957.

STAFF IN ALUMNI AFFAIRS AND DEVELOPMENT are collecting Zehrs tapes (Zehrs-Save-a-Tape-Plan) for the Alumni House project. All help is appreciated and they invite people to send their Zehrs tapes to Room 373, Johnston Hall.

courtyard; INFORMATION MEETING, 7:30 p.m., UC 442.

Worship - ROMAN CATHOLIC MASS, 12:10 p.m., Chapel, UC Level 5.

Interdepartmental Seminar Series in Systematics - USING PHYLOGENETIC PATTERNS IN TESTS OF EVOLUTIONARY PROCESS THEORIES, AND VICE VERSA, W. Maddison, 4:10 p.m., APS 141.

Lecture - FALSE DISTINCTIONS, Gwynne Dyer, 7:30 p.m., WMH, \$2.50.

TUESDAY, Jan. 20, 1987

Worship - ECUMENICAL CAMPUS MINISTRY, Know Your Bible, noon, UC 444; ROMAN CATHOLIC MASS, 12:10 p.m., Chapel, UC Level 5.

Our World - SHOULD CANADA STAY IN NATO AND NORAD? 12:10 p.m., UC 442.

Senate - MEETING, 8 p.m., MacN 113.

WEDNESDAY, Jan. 21, 1987

Concert - UNIVERSITY OF GUELPH JAZZ ENSEMBLE, noon, UC courtyard.

OVC Seminar Series - SMALL ANIMAL NUTRITION: CURRENT ISSUES, Glenn Brown, 12:10 p.m., Clinical Studies 508.

Worship - ECUMENICAL CAMPUS MINISTRY, Holy Communion, 12:10 p.m., Chapel, UC Level 5.

OVC Evening Business Management Program - CLIENT RELATIONSHIPS, Ed Rudyk, 7 p.m., OVC 508.

THURSDAY, Jan. 22, 1987

Concert - LE TRIO DE MONTREAL, 12:10 and 1:10 p.m., MacK 107.

Dance - THE MIDNIGHT RAMBLERS, 8 p.m., PCH, sponsored by the University Centre.

The following abbreviations are used in *at Guelph*: AC=Athletics Centre; ANNU=Animal Science Nutrition; APS=Animal and Poultry Science; BG&Z=Botany-Genetics-Zoology; CM=Chemistry-Microbiology; CS=Crop Science; CSRC=Counselling and Student Resource Centre; Eng=Albert A. Thornbrough building; FS=Food Science; HAFA=Macdonald Stewart Hall (Hotel & Food Administration); HB=Human Biology; Hort=Horticultural Science; ICS=Institute of Computer Science; JH=Johnston Hall; LA=Landscape Architecture; L/A=Lennox/Addington; Lib=McLaughlin Library; LRS=Land Resource Science; Mac=Macdonald Hall; MacK=MacKinnon building; MacN=MacNaughton building; PCH=Peter Clark Hall; UC=University Centre; WMH=War Memorial Hall.



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A question of ethics

Committee, code and policy will assure right relationships

An advisory committee on ethical behavior (ACEB) to deal with problems arising from breaches in ethical behavior on campus by faculty, students and staff is to be established, President Burt Matthews announced in a "Memo from the President" to the University community Jan. 20.

The action springs from a recommendation

contained in the final *Report of the Ad Hoc Committee on Ethical Behavior*, which was received by Matthews in October 1986. The president appointed the committee in May 1985 to develop a policy, including a code of ethics, that would serve as a guide to the relationships among faculty, staff and students.

Continued on page 2.



It's back to the books again with winter semester '87 in full swing. Full-time undergraduate enrolment is 9,658; part-time undergraduate enrolment is 1,539.

Photo by Herb Rauscher, Illustration Services

UofG to quit workplace smoking

Two steps towards making the University of Guelph a smoke-free environment were unveiled Jan. 19 by President Burt Matthews in a "Memo from the President" to the University community.

As of May, faculty, staff, students and visitors will be encouraged to confine their smoking to those areas designated as smoking areas within any University building. And as of May 1988, smoking will be prohibited in any University building except in designated smoking areas, if any. All public spaces within buildings, open work areas and private offices will become non-smoking areas.

Matthews is also asking the University Centre board and the Department of Residences to pursue a similar direction in their areas.

University efforts in support of health education, including smoking cessation clinics, are important factors in the success of the University's smoke-free objective, said Matthews, and these will continue to receive University support. Stu Brennan, Personnel, says the second smoking cessation clinic has just finished and another is planned for later in the spring.

The president's memo is a follow up to one in March 1986, when he announced the University's intention to work towards a smoke-free environment "within a reasonable length of time." Matthews's plans reached most members of the University community on "Weedless Wednesday," part of National Anti-Smoking Week sponsored by the Canadian Lung Association.

Matthews told *at Guelph* that he has not heard any opposition from campus smokers. Lloyd Cummins, Maintenance, president of the University of Guelph Staff Association, said a recent UGSA survey indicated that its members were "very much in favor" of a smoke-free workplace environment. ○

The committee, chaired by Prof. Lou Abbott, History, was also instructed to propose ways to investigate allegations of unethical behavior.

Matthews says he endorses the general thrust of the report. "The University should make every effort to promote and ensure maintenance of high standards of ethical behavior," he says.

The first draft of the committee's report was distributed to all members of the University for comment to the committee.

Abbott says the committee was guided by principles enunciated in *Toward 2000: Challenges and Responses. Aims of the University of Guelph*, which says: "Any university . . . dedicated to promoting the good of society must be concerned with the moral development of its members," and affirms as Aim 10 in the report: "to foster a collegial environment and to be sensitive to the well-being and integrity of our students, faculty and staff."

Under its terms of reference, ACEB will encourage due consideration of ethical aspects of interpersonal behavior and it will review, on the president's request, allegations of unethical behavior in cases that do not come under collective or contractual agreements or other personnel policies. ACEB will also advise the president on the validity of these allegations and recommend appropriate action.

All deliberations on individual cases will be confidential, says Matthews.

Scope of action

ACEB will, if requested, advise individuals or the president on the subject of ethical behavior and on matters of policy related to ethical behavior. It will also establish procedures to resolve complaints and allegations referred to it by the president. The procedures could include, in sequence: informal discussion (where ACEB will try to achieve a resolution through informal discussion with the parties involved); complaint proceedings (if conciliation is inappropriate or unsuccessful, the committee will begin complaint proceedings. When completed, it will recommend a course of action to the president); and referral (if complaint proceedings fail, the committee may recommend to the president that the issue be investigated by external authorities. If a complainant begins proceedings outside of the University — for example, with the Ontario Human Rights Commission or the courts — ACEB's proceedings will stop.) Abbott says the key to this process is the importance the committee will place on informal discussion.

Abbott says the committee began its work because Matthews had some "delicate and unpleasant" cases of sexual harassment to deal with, and he needed a committee he could turn to. "We did not want to focus on sexual harassment only," says Abbott, "but we have dealt with it under 'Ethics of Interpersonal Behavior.'" (see below). Abbott says he is "disappointed" that the president did not accept the committee's recommendation to establish a University ethics committee that would deal directly and autonomously with complaints. Instead, Matthews has decided on an advisory committee that will advise on cases forwarded to ACEB by the president.

"Perhaps the committee was a little naive to

think it could act on its own," says Abbott. Matthews's concerns that such a committee could cause chaos because of the existing collective agreement system and personnel policies and procedures are legitimate, he says. But "he's narrowed down our role. People can't come to ACEB directly; they must go through the president first."

Abbott says ACEB and the new policy and code of ethics should help faculty who feel edgy about sexual harassment, and students who feel intimidated because of their positions as students.

He isn't expecting ACEB to be burdened with work. "There may be brisk business once this goes public, but I think the fact that complaints must go before the president first will be a kind of valve."

Membership

Abbott is pleased that Matthews has accepted the committee's recommendation on composition of ACEB. Membership has yet to be named, but it will consist of a chairperson, two faculty from different degree programs, one staff who is a member of one of the unions on campus, one staff who is not a member of a union, and a graduate and an undergraduate student. Each member will serve for a three-year term except for the students, who will be named for two-year terms. Members will be appointed by the president with advice from associations and unions on campus to ensure continuity within ACEB over time.

Complaint procedure

Anyone who believes they have been subjected to unethical behavior should make a complaint in writing, without undue delay, to the appropriate unit head. If no satisfaction is received, the complaint should be made to the appropriate dean or director and, if necessary, to the president. Allegations of ethical misconduct should be put in writing by the person receiving the complaint and given to her/his supervisor within 60 days of the incident because failure to act may be construed as condoning the alleged behavior. (There will be some variation in this reporting process in the case of a complaint of sexual harassment.)

After receiving the complaint, the president may act to resolve it or refer it to ACEB for action. Any complaints whose resolution falls within the jurisdiction of the procedures set out in collective or contractual agreements will be considered and resolved through those procedures, not through the ACEB.

Guiding principles

The advisory committee's report says the University and its members should be guided by three principles in the conduct of its affairs:

- **Justice** — In human affairs, a just solution to a moral dilemma is a solution that is recognized by all parties and requires all parties to have an equal commitment to seeking such a solution, assuming that all parties have equal access to justice. This principle supports the dignity, worth and integrity of the individual;
- **Freedom of expression** — It is a fundamental moral requirement in the communal pursuit of knowledge for all those involved to

understand the perspective of others and to submit ideas to reasoned debate. This principle supports the primacy of rational inquiry;

- **Service** — All scholarship and research should contribute positively to the world in which we live and the community we serve. This principle supports the betterment of humankind.

These and the values they support must form the basis of the University's endeavors within its four roles as corporation, body of professionals, educational institution and human community, says the report.

Areas of application

The report defines a tentative set of contexts in which behavior is affected by ethics, which the report says should be regularly re-evaluated and revised:

- **Decision-making** — All decisions affecting faculty, students and staff must be governed by the principle of justice; these should be made without reference to age, race, creed, color, ancestry, national origin, religious affiliation or belief, sex, sexual orientation, marital status and/or family relationship, place of residence, membership in any lawful organization or disability (except where the disability would clearly prevent the carrying out of duties). All those affected by a decision are entitled to an explanation regarding the reasons for it;
- **Change** — In the words of the aims and objectives report: "The acceleration of the rate of change (affects) all our lives." This requires the University "to educate for change" by "developing critical, analytical and moral judgment." It also demands a moral concern for those affected by change both within and outside of the University community. The University must, as an integral part of the change process, give consideration to the welfare of those individuals who might be adversely affected by the proposed change;
- **Teaching and learning** — The University is committed to the pursuit of truth, the advancement of learning and the interpretation and dissemination of knowledge; teachers and students alike are under a moral obligation to exercise their respective rights and duties in such a manner as to uphold the integrity of their disciplines and the dignity of the individual;
- **Interpersonal behavior** — The inherent worth of all individuals demands that they be granted full and equal enjoyment of employment or educational services, benefits, opportunities or facilities devoid of any offensive, intimidating or hostile pressures within the workplace, classroom or other area of the University;
- **Supervision** — Every member of the University community should be treated in a fair, equitable and reasonable manner regardless of rank, classification, position or status. All academic, employment or other services, benefits and facilities must be offered solely on the basis of prior agreement, freely and openly arrived at, and appropriate performance must be judged within the context of such agreements;

Continued on page 3.

McCallum recognized for co-op education

Bruce McCallum, associate director, Career Services, Counselling and Student Resource Centre, has received the Albert S. Barber Award from the Canadian Association for Co-operative Education. The award, first presented in 1983, is in recognition of outstanding contributions to the advancement of the philosophy and practice of co-operative education in Canada.

McCallum is a charter member of the association and served as president in 1976/77. He edited the association directory for several years and served as newsletter editor and a member of the publications and the planning committees. Internationally, McCallum is a founding member of the World Assembly on Co-operative Education and is a member of the U.S. Co-operative Education Association, for which he served on the awards committee.

The first co-op student placements at Guelph took place in January 1982 and

involved 22 students. Now there are about 300 Guelph students in co-op programs, an area that continues to grow, says McCallum. Some 60 post-secondary institutions in Canada now have co-operative programs and more schools and more disciplines are becoming involved all the time, he says.

Originally, only engineering students participated in co-op programs, but gradually other disciplines developed study-work programs as well. Now graduates of co-op programs are in decision-making positions in industry, he says, and this is creating more of a demand for co-op students.

Co-op education was first introduced at the post-secondary level in Canada at the University of Waterloo in 1957. The Barber Award is in honor of Dr. Bert Barber, considered a pioneer in Canadian co-operative education through his work at Waterloo. ○



Bruce McCallum, left, receives the Albert S. Barber Award from Martin Hendy, director of co-operative education at the British Columbia Institute of Technology and past-president of the Canadian Association for Co-operative Education.

Ethics Continued from page 2.

- Resource use — All members of the University — staff, students and faculty — have the obligation of fulfilling their designated responsibilities or activities in a fair and ethical manner for the common good of the institution. It is understood that University property and facilities are available only for use in relation to University employment and not for private resources.

In recommending a University ethics committee, the report acknowledges that there are already existing mechanisms to foster a high standard of personal conduct and to protect human rights, and these should be the first recourse for seeking redress. But these were not designed to deal with a broad spectrum of ethical issues, says the report, and not all members of the University community are included within the scope of such arrangements. Everyone on campus should have access to a forum where ethical issues are recognized and

open to scrutiny.

The report says it is anticipated that at least three new kinds of cases would be confronted in maintaining standards of ethical development. These would be cases in which a person or group complaining of hurt on ethical grounds has no recourse to relief because no policy or procedure is available; cannot find effective relief through available policies or procedures; and cannot find relief through available policies or procedures because of limits on or aberrations in current social perspectives.

Also serving on the ad hoc committee were: Andre Auger, director, Counselling and Student Resource Centre; Prof. Peter Chisholm, School of Engineering; Prof. Patricia Gentry, Biomedical Sciences; Jennifer Reader, Chemistry and Biochemistry; Jim Smith, graduate student; and Mike Wallace, undergraduate student; with John Hurst, University Secretariat, as secretary.

A complete copy of the report is available from the University Secretariat, Level 4, University Centre, Ext. 2114. ○

Excellence fund money at work

The University has finished allocating its \$3,405,660 share of the 1986/87 excellence fund. The \$50-million fund, which is in addition to the regular operating grants given to Ontario universities by the Ministry of Colleges and Universities, is divided into three categories — \$25 million for instructional equipment and library enhancement funding, \$15 million for research and \$10 million for faculty renewal.

For instructional equipment and library enhancement, Guelph received \$1,436,000. Some \$455,000 is being used for new or upgraded teaching equipment, \$581,000 is being used to acquire and enhance library reference material for instructional purposes, and the balance will cover a portion of the costs of the teaching-related portion of the new ROLM telecommunications network, says John Miles of the Budget Office.

The \$1,404,000 earmarked for research is being allocated to acquire equipment for research (\$530,000), to hire new research support staff (\$95,000), to upgrade the telecommunications system in support of research programs (\$275,000), to renovate existing research space, provide new research space or install equipment (\$300,000), to obtain equipment for magnetic resonance research (\$100,000) and to provide administration and physical plant support services for research programs (\$104,000).

Sixteen faculty members are being hired using the \$565,662 earmarked for faculty renewal. The largest portion of this — \$240,150 — has gone to the College of Biological Science, the second largest — \$112,040 — to the College of Social Science. Five of the new faculty are women.

Charles Ferguson, vice-president, administration, says the faculty renewal portion of the excellence fund will be received for the next four years because "the ministry is committed to the total program of 500 new faculty for the Ontario university system over the period of five years." The provincial government has elected to continue the excellence funding in altered form in the next fiscal year, he says. ○

Marketing course offered

Lack of marketing know-how causes many new business ventures to fail. Continuing Education is offering a course on "Marketing Small Businesses" for people who own and operate a small business. The course was developed by Peter Barrow, president of Peter Barrow Communications, a Guelph and Waterloo company that specializes in public relations and marketing for the private and public sectors.

The Tuesday evening course, which begins Feb. 3, is designed for people who have little or no experience in marketing. Participants will receive help in developing a market plan, ideas for marketing on a shoestring budget and guidance in how and where to advertise.

To register, contact Continuing Education, Room 160, Johnston Hall, Ext. 3956. ○

Pletsch renews responsibilities to agricultural leadership program

by Betty Bean-Kennedy

As Prof. Doug Pletsch, Rural Extension Studies, prepares to embark on his second, two-year term as curriculum co-ordinator of the Advanced Agricultural Leadership Program, he feels good about what the program has accomplished in its first two years. The first 30 participants, who began the program in March 1985, will complete the program next month, and Pletsch says he expects to see them moving into prominent leadership roles over the next 10 to 15 years.

The program provides continuing education opportunities for people associated with agriculture who have already demonstrated leadership skills. "In almost every other industry, there is some type of training program for management, but most people in agriculture haven't had the opportunity for leadership training," says Pletsch. The program aims to ensure there is a pool of knowledgeable and effective leaders in agriculture and rural Ontario who are prepared to deal with the complicated issues in business, economics and government that increasingly impinge on agriculture, he says.

The plan is to have a new group start the program every other year; the second group begins in April. Over the two-year period, about 55 days are devoted to the program, which includes 10 two- or three-day seminars, a North American study travel and an international study travel. Pletsch says participants are expected to develop an increased awareness of Ontario's agricultural industry in relation to the national and international communities, expand their understanding of the Canadian economic, political, cultural and social systems, broaden their perspectives on major societal issues and increase their ability to analyse and react to the complex problems facing people, agricultural systems and rural communities.

In July 1986, a 10-day study travel took the group to Alberta, British Columbia and California; this month they will travel to England, Belgium, France and East and West Germany. The seminars have taken place in various parts of the province and participants have been exposed to a variety of experiences. During one session, a representative from Energy Probe presented an environmentalist's view and objection to the Pickering nuclear power plant. This was followed by a visit to Pickering and a presentation by Ontario Hydro representatives offering that organization's point of view on the issue. "Co-operation from resource people has been excellent," Pletsch says.

To be considered for the program, nominees and applicants must complete a comprehensive application that includes a discussion of what they consider the three most important problems facing society today and how they relate to their own community and to Canada.

The selection process begins with regional interviews. Ratings by regional committees are forwarded to a provincial committee, which



Prof. Doug Pletsch

(Photo by John Majorossy, Illustration Services).

recommends 30 participants and five alternates. The board of directors makes the final selection.

At the beginning of the program, participants are asked to identify an issue they wish to concentrate on and, during one of the subsequent seminars, are required to make a presentation on that issue. Over the two years, each participant is involved in a variety of leadership roles, and all sessions are videotaped, allowing participants to review their own performances.

Pletsch, who co-ordinates the program on a 40-per-cent secondment from his department, says his involvement with the program has proved to be complementary to his own work. "It's rural extension related, it's grassroots experience." In addition to working ideas from this into his teaching, he says the experience enables him to identify research areas.

He is monitoring the leadership program using a bench mark study of the 30 participants and a control group that will be followed up by a survey at the end of the program. He plans to conduct a study with participants in the next session as well.

What do the participants themselves think of the program? Evaluations after the first year of the program included such comments as: "I have become more broad-minded with less pat answers to problems"; "It has provided lots of opportunities to network with people in the know"; "AALP has provided me with an opportunity to meet people, make valuable contacts, develop an increased awareness of social, political and agricultural issues"; "It has built my confidence from being a visionary, through to developing and implementing programs."

Participants each pay \$2,500 for the program. The University, the Ontario Federation of Agriculture and the Ontario Ministry of Agriculture and Food together provide about 25 per cent of the cost of the program, and the balance is raised through fund-raising efforts by the Foundation for Rural Living. ○

Notice from the Office of the Vice-President, Academic

Applications are invited for the position of director of Computing Services, a senior administrative post reporting to the executive director for information technology.

The director is accountable for managing the central computer services of the University, for developing and maintaining systems that support the administrative or information functions of the University, and for providing appropriate support services to the academic community.

Computing Services, with a staff of about 60 people, operates four IBM computers in the 4300 series, as well as a Vax 70 and a Sperry 5000. A growing number of campus microcomputer users and laboratories are supported by CS.

The incoming director will be expected to participate in the continuing development of information technology at the University. Candidates will be expected to have an appropriate academic and technical background and have extensive experience in the management of computing facilities and personnel.

Applications, including a complete resume, should be sent by March 15 to Dr. Jack MacDonald, Chairman, Selection Committee, Office of the Vice-President, Academic, Level 4, University Centre. Nominations and comments may be directed to members of the committee: Prof. Ernest Dalrymple-Alford, acting dean, College of Social Science; Dr. Ted Valli, associate dean, OVC; Prof. David Swayne, Computing and Information Science; Prof. John Ogilvie, director, School of Engineering; Margaret Beckman, executive director for information technology; and Bill Moore, Financial Services. ○

Letters to the editor

Money Better Spent

I want to echo the sentiments expressed in Prof. David Elrick's letter in the Dec. 18, 1986, issue of *at Guelph*, "Enough is Enough." We must be the most assessed, reviewed and evaluated university anywhere.

One wonders what there is to be found out by yet another series of internal reviews that has not already been written up in numerous previous evaluations. Especially after the ill-fated Working Group I review that did more to lower faculty morale than anything the administration has done recently, do we have to go through all this again?

The money spent on this bureaucratic exercise would be better spent on keeping our facilities in better shape.

Prof. John deMan,
Food Science. ○

ISLANDS OF GREEN

Rethinking rural planning for land resources

Islands of Green, a practical manual for natural heritage protection published in November by the Ontario Heritage Foundation (OHF), discusses why natural resources should be protected and offers a model of how to deal with land. "It's really a new approach to rural planning," says one of the book's authors, Prof. Stewart Hilts, Department of Land Resource Science and the School of Rural Planning and Development.

Hilts says the manual is only one part of the activities going on in the province related to natural heritage protection. Its purpose is to help citizens take an active role in protecting Ontario's environmental legacy, he says, and was written for interested amateurs and undergraduate students.

The book grew out of Hilts's research into innovative ways to protect land resources, including natural areas. People tend to think of heritage groups as organizations to preserve historic buildings, Hilts says, but the National Heritage League, a network of public and private agencies operating under the auspices of the OHF, works to identify, protect and manage Ontario's natural heritage, such as wetlands and areas supporting endangered plants or animals.

Another part of the overall program is the "Natural Heritage Stewardship Award," an honorary plaque of recognition for landowners who have voluntarily pledged to protect and monitor the natural heritage features of their property. This award, begun this year, is a co-operative project of the NHL, Hilts's research team here at Guelph, the OHF and the ministries of Citizenship and Culture and Natural Resources.

The first recipients of the award, presented at the annual meeting of the NHL in November, are Kay and Carl Roseburgh of St. George, owners of 29 acres of the Grand River Forest, and Val and Gary Green of Puslinch, owners of 50 acres of the Beverly Swamp. The award is a direct result of Hilts's research, and has been adopted for use by the OHF across the province.

The research could be called an "integrated outreach project," says Hilts, because it has close ties with several provincial agencies, especially the Ministry of Natural Resources. Its aim is to discover the best ways to involve private citizens, non-governmental organizations and government agencies in co-operative protection and conservation activities. Hilts says they have contacted about 700 landowners in southern Ontario and have received positive feedback on the project.

The research is aimed at developing methods of conservation from the bottom up, rather than the top down, as government expropriation or land purchase would be, he says. It can be seen as a useful complement to acquisition of sensitive areas and regulation through land use planning by government agencies.

A newer aspect of the conservation research is looking at how it ties to soil conservation, says Hilts. One of the questions he'd like to see answered is how farmers' attitudes differ from



Prof. Stewart Hilts

Photo by Herb Rauscher, Illustration Services

other rural landowners' attitudes surrounding the whole issue of conservation. Incentives, such as tax relief, might make it possible for more sensitive areas to be preserved in their natural state, he says, and this is another of the suggestions he and his research team have checked out.

This work contributed to Premier David Peterson's announcement last fall of a tax rebate and changes to provincial assessment policies for landowners of wetlands and other natural areas. The optimum result of the research would be to design a mixture of incentives that would see maximum conservation of both the province's natural heritage and agricultural land, says Hilts. Real government support is available, specifically for the protection of wetlands, he says. Some \$1 billion is budgeted over the next 15 years under the North American Waterfowl Management Plan.

Hilts says he's fortunate that his research fits so well with his teaching. "Natural Areas Planning and Management" is one of his courses that integrates the practical information his research project is involved with, as do some courses in the resources management major that he heads on campus.

Recently the project has expanded, with assistance from the World Wildlife Fund, to provide additional funding from the Canadian National Sportsmen's Show, the McLean Foundation, the Laidlaw Foundation and Wildlife Habitat Canada.

Hilts's aim is to help change the way people think about rural planning for all land resources. He sees his research project providing a key link between government agencies and rural landowners as they co-operatively seek new ways of dealing with conservation issues. He says *Islands of Green* is one contribution along the way. ○

Women in hospitality industry topic of conference

The student council of the School of Hotel and Food Administration is sponsoring a conference to explore the topic of working with women in the hospitality industry Jan. 27.

Organized with the support of the Women's Resource Centre and the Association of International Students in Economics and Commerce, the programs begin at 7 p.m. in Room 149 of Macdonald Hall, and are free and open to interested participants.

Conference participants will be exploring such questions as: "What does the future hold for women in the hospitality industry, what are the realities that women must face and what do

men need to learn about working with women as peers and colleagues? The evening will feature a panel discussion on new developments in the hospitality industry that reflect the growing role of women in management.

Among the senior business executives taking part will be: Susan Hassler, general manager of the 427 Commonwealth Holiday Inn; Carl Binder, executive vice-president of Valhalla Inns; Cindy Livock, purchasing director for Canteen of Canada; James Johnston, vice-president of Scott's Restaurants; and Morag McKenzie from the management consulting firm of Pannel, Kerr and Forester. ○

FEBRUARY FROLIC at the Arboretum's J.C. Taylor Nature Centre Feb. 1 features guided walks at 1 and 3:30 p.m. Also scheduled is a concert of Indian classical music with Muthulakshmi Ranganathan and Kalluri Krishna Mohan Rao at 2:30 p.m. in the OAC Centennial Arboretum Centre.

THE DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY will hold its annual dinner and awards night Jan. 28 at the Cutten Club, with a cash bar at 6 p.m. and dinner at 7 p.m. Tickets are \$8.50 for students and \$14.50 for faculty and staff and are available from Heather Kirby, Room 202, Chemistry-Microbiology building, Ext. 3802.

CFRU, 93.3 FM, the campus radio station, has two new programs for listeners. "Albannach," Sundays from 11 a.m. to noon, features traditional Scottish, Irish and Breton music. Hosted by Ted Cowan, Dave Baxter and David Cowan, the program will offer informative commentary on the music and its history. "Feminist Frequency," CFRU's latest public affairs show, airs Thursday from 6 to 6:30 p.m. and deals with issues affecting both men and women on campus and in the Guelph community. It will be hosted by Valerie Brooks and Kim Bolton.

STAFF IN ALUMNI AFFAIRS AND DEVELOPMENT are collecting Zehrs tapes (Zehrs-Save-A-Tape-Plan) for the Alumni House project. All help is appreciated, and they invite people to send their Zehrs tapes to Room 273, Johnston Hall.

VIEWPOINTS, the fifth annual juried exhibition at the Macdonald Stewart Art Centre, opens Jan. 30 with a viewing from 8 to 10 p.m. Award presentations will be made at 8:30 p.m. Music will be provided by Jeff Bird, Jane Ellenton, Tony Quarrington and David Houghton and there will be a cash bar. On Feb. 8 at 2 p.m., there will be a tour of the Viewpoints exhibition and a discussion with juror Alan Elder. Admission is free and everyone is welcome.

TAKING SIDES IN SOUTHERN AFRICA is a national conference on Canada's role in international action to end apartheid, organized by the Canadian Council for International Co-operation. It is in Montreal Feb. 27 to March 1. The conference is limited to 350 delegates and registrations must be sent before Jan. 25. For more information and application forms, call Susan James, Development Education Program, Centre for International Programs, Ext. 6914.

LIFE AFTER HOCKEY, a one-man tribute to Canada's national sport sponsored by the University Centre, is Feb. 4 at 8 p.m. in War Memorial Hall. Kenneth Brown, the writer and performer of "Life After Hockey," offers a funny and thoughtful account of the Canadian obsession with hockey that is understandable to non-hockey fans. Tickets are \$11, \$10 and \$9 general admission and \$10, \$9 and \$8 for students and seniors, and are available at the University Centre box office, Sam the Record Man, the Bookshelf Cafe and The Corner in Stone Road Mall.

MEMBERS OF THE FACULTY CLUB must reserve by Jan. 29 for a Feb. 5 dinner provided by Enver's of Morriston in the Faculty Lounge, Level 5, University Centre. Cocktails are at 6 p.m., followed by dinner at 7 p.m.; cost is \$30 per person. Call Ext. 8578 for reservations.

SATURDAY CHILDREN'S ART CLASSES at the Macdonald Stewart Art Centre run until March 7. Session I for 5-to 7-year-olds, are 10 a.m. to noon and Session II, for 8-to 10-year-olds, are 1:30 to 3 p.m. Cost for the eight sessions is \$37.50 for members and \$45 general.

CANADIAN PERSPECTIVES ON THE CHANGING WORLD is the opening lecture of 1987 Global Development Awareness Week with Archbishop Edward Scott Jan. 16 at 7 p.m. in Seeley Hall, Trinity College, 6 Hoskins Ave., Toronto. There will be a reception in honor of the archbishop following the lecture. For more information on this lecture or other events occurring during the rest of the week, contact Susan James, Development Education Program, Ext. 6914.

THE INDIA STUDENTS ASSOCIATION presents a Republic Day Celebration Jan. 24 at 8 p.m. in War Memorial Hall. There will be a cultural show followed by a full-course dinner. Tickets are \$7 and are available in Room 221, University Centre, and at the University Centre box office.

THE ANNUAL ART TOUR sponsored by the Macdonald Stewart Art Centre goes to New York City this year. Cost of the 2 1/2-day trip, including hotel accommodation, return airfare, transportation to and from Guelph, two resource people and two museum tours is \$530 for art centre members, \$565 for non-members, based on double occupancy. Early Bird rates may still be available. Contact Kim Efthimakis at P. Lawson Travel, University Centre, 823-1280, for details.

THE GREAT ESCAPE ON SNOWSHOES, sponsored by the Guelph Field Naturalists, is Jan. 31 at 1:30 p.m. at the Guelph Lake Nature Centre. Leader is Dan Schneider. Phone 836-7860 to reserve snowshoes; minimum age is 8.

THE UNIVERSITY CHAPLAINS are offering a course on marriage preparation. It will meet in the FACS building lounge Feb. 6 from 7 to 10 p.m. and Feb. 7 and 21 from 9 a.m. to 4 p.m. Information and registration forms are available from any of the chaplains, Room 151, Johnston Hall, Ext. 8909.

THE GERONTOLOGY RESEARCH CENTRE is sponsoring a series of seminars focusing on aging and the elderly. Interested people are invited to bring their lunch and enter into informal discussion with the presenter. The series opens Jan. 23 with two short National Film Board films: "A Chronic Problem" and "The Old Person's Friend." The seminar begins at 12:10 p.m. in Room 334, University Centre.

LAND RESOURCE SCIENCE SEMINARS are held Tuesdays at 3 p.m. in Room 124, Land Resource Science building. Featured on Jan. 27 is Ross Wein, department of biology, University of New Brunswick, a visiting scientist in the Department of Land Resource Science. His topic is "Land Management Problems in Canada's Largest National Park."

FOOD SERVICES has introduced a new meal plan in Peter Clark Hall, Level 0, University Centre, for off-campus students, staff and faculty. Ten lunches, which include hot entree, bread, salad and non-alcoholic beverage, are available for \$36 until April 3. A special introductory offer reduces the price to \$33. The introductory offer expires Jan. 30.

BOWL FOR MILLIONS, the annual fund-raising event of the Big Brothers Association, begins with opening ceremonies Feb. 7 at noon at the Town & Country Bowlerama. Closing ceremonies are Feb. 14 at the Sportsmen's Bowlerama. During the week, the two bowling centres will host special events and a variety of challenge matches. If you wish to bowl or to sponsor a bowler, contact Big Brothers at 123 Woolwich St., 824-5154. Lanes may be booked by calling the bowling centres. Funds raised from Bowl for Millions support the association's efforts to supply a male adult friend for boys from father-absent homes and a group program. There are more than 90 matched big and little brothers and 63 children in the group program, and 46 boys waiting to be matched.

GUELPH LONDON HOUSE, a student residence owned and operated by the University of Guelph at 105 Albert St., London, England, is available for travellers June 18 to Sept. 15. Available are two self-contained furnished apartments, each with kitchen, suitable for four people; two double rooms with two single beds and shared bathroom; and two single rooms with one single bed and shared bathroom, with access to a fully equipped kitchen and common room. Daily rates are \$68 for four-person apartments with a minimum booking of five consecutive days; double rooms are \$37 and single rooms \$20, both with minimum bookings of seven consecutive days. All linens are included. The residence, located near Regent's Park, is ideally situated for easy travel to all parts of London by public transportation. For more information and available booking dates, contact John Wills, Ext. 2734.

MARKETING ORGANIC FOOD FROM SOIL TO TABLE is a conference being hosted by Agricultural Alternatives Jan. 23 and 24. Registration is from 7:30 to 8 p.m. Jan. 23 in Room 441, University Centre. At 8 p.m., Thomas B. Harding Jr. of Agrisystems International, Wind Gap, Pa., will speak on "Farm Marketing." Saturday's program, which begins at 9 a.m. in Room 117, MacKinnon building, will include addresses and workshops as well as a panel discussion. Panel members Mary Lou Morgan, Harding and OAC Dean Freeman McEwen, representing the consumer, the producer and an educational institution, will deal with the topic "Let's Discuss Research." Conference fee of \$15 includes lunch Saturday. For information, contact Ruth Knight, 763-4151, or Alanna McQuaid, 853-0369.

WORKING IN DEVELOPMENT, the third annual conference on working in international development, sponsored by the Development Education Program, the Canadian International Development Agency and the Centre for International Programs, opens Jan. 30 at 7:30 p.m. in Room 117, MacKinnon building, and continues Jan. 31 from 8:45 a.m. to 5:15 p.m., starting with coffee on the third floor of the MacKinnon building. Cost is \$10 and includes Saturday lunch. Registration is limited to 80 participants; call Ext. 6914 to register.

PIANIST LIANA LAM is the guest artist at the Department of Music's Thursday noon-hour concert Jan. 29 in Room 107, MacKinnon building. Lam, 19, has distinguished herself in piano competitions since the age of nine, when she was named winner of the Junior Bach Festival at the University of California at Berkeley. A recipient of a Canada Council grant, she is now studying with Joseph Kalichstein at the Juilliard School. She made her recital debuts at Ottawa's National Arts Centre and Toronto's St. Lawrence Centre last year. Program I at 12:10 p.m. consists of "Sonata in D Major, K576," by Mozart and Schumann's "Sonata in G minor, Op. 22." Program II at 1:10 p.m. features Beethoven's "Sonata Op. 10, No. 2," two etudes: "La Leggerezza" and "Harmonies du soir" by Franz Liszt and "Alborado del gracioso" from "Miroirs" by Maurice Ravel.

THEOLOGY FROM EXPERIENCE, a Wednesday evening discussion series sponsored by the University of Guelph Catholic community, tackles many contemporary issues. On Feb. 4, Douglas Letson, director of the Institute for Studies in Theological Renewal, St. Jerome's College, Waterloo, speaks on "Religion and Politics in the Canadian Context — a Roman Catholic Perspective." Future topics include spirituality and faith development of youth, the major theological differences between Judaism and Christianity, women's experience of scripture, liberation theology, religion in modern art, and rape trauma and dreams. The discussions are held in Room 332, University Centre, and begin at 7:30 p.m.

Job opportunities

As of *at Guelph* deadline Jan. 16, 1987, the following opportunities were available:

Extension Pedologist, Department of Land Resource Science; contractually limited. Salary will be commensurate with qualifications.

Director of Computing Services, Computing Services. Salary commensurate with qualifications and experience.

Information Technology Co-ordinator, OAC Dean's Office. Salary commensurate with qualifications and experience.

Secretary, Pensions and Benefits, Personnel Department; temporary full-time from Feb. 23/87 to Sept. 18/87. Hiring range: \$282.66 to \$304.84.

The following positions were available to on-campus employees only:

Receptionist, Division of Continuing Education; temporary full-time from Feb. 19/87 to Feb. 18/88. Hiring range: \$233.02 to \$246.36.

Driver, Grounds Department. Job rate: \$10.28 per hour; probation rate: \$.20 per hour lower than job rate.

Agricultural Assistant, Animal Care Services, Office of Research. Salary range: \$392.38 start; \$413.94 six-month rate; \$432.48 one-year rate.

It is the University's policy to give prior consideration to on-campus applicants. To determine the availability of University employment opportunities, contact employment services and training, Level 5, University Centre, or telephone 836-4900.

GUELPH INTERNATIONAL FILM FESTIVAL has two training positions open — project organizer/assistant festival programmer and project field researcher. These special grant positions are available to people unemployed for 24 of the last 30 weeks. Women and native people will be given preference. Qualifications are an interest in international development and/or Third Cinema, communication skills and interest in developing skills in public relations, fund raising, research and organization. The positions begin Feb. 2 and end Dec. 31. Call Ext. 3778 for more information. Resumes and letters of application should be sent to: GIFF Hiring Committee, Ed Video, 16A Wyndham St., Guelph, Ont. N1H 4E5.

Personals

For Sale: Women's patent leather tap shoes, size 8, Laurie, Ext. 6582 or 823-8370, after 6 p.m. 1975 Volvo 244 DL, overdrive, Chris, 821-7081, after 5 p.m. 1983 Olds Ciera, Ext. 3078 or 824-7779. Coronet Super 12 electric typewriter, 823-5013, 1 to 9 p.m. Men's ski suit; skates; lined boots; women's skates; infant car seat; toilet trainer; six-pane window mirror; rubber car mats, front and back, 822-3129. Women's white figure skates, size 10, Kim, Ext. 4930. Three-bedroom bungalow, University area, 763-5522 or 763-4986. Sherlock-Manning apartment-size upright piano with bench; two three-speed women's bicycles, Rosemary, Ext. 6169 or 837-2143. Carmor air-tight stove, Ext. 3108. Waxless cross-country skis, 145 cm, boots and poles, Ext. 2747 or 855-6311, after 6 p.m. Single bed, mattress, box spring, frame and headboard, 822-2464. Men's Koflach downhill ski boots, size 11, 824-0432. Scuba gear; hockey equipment; karate outfit; water heater; cash register; Oscar Schmidt auto harp, 821-0912, after 6 p.m. Three-bedroom house, old University area, 837-1615.

Wanted: Women's figure skates, size 6, Linda, Ext. 6581. Used crib in good condition, Chris, Ext. 2757 or 824-9535, after 7 p.m. Super 8 movie projector with sound in good condition, Ext. 3744/3907 or 837-1732. Accommodation for mature businesswoman, non-smoker, no pets, in one- or two-bedroom, unfurnished flat or townhouse from March 1, maximum \$500 monthly, Will, 824-9542, after 5 p.m. Men's ski boots, size 12, 824-0432.

For Rent: Two-bedroom house, carpeted, unfurnished, available immediately until Sept. 30, \$600 per month, 822-9608.

Available: Professional illustrations, anatomical, geographical, botanical, etc., logos or line drawings, Lloyd, Ext. 4048 or 836-6884, after 5 p.m.

Positions elsewhere

The University of Saskatchewan is seeking an assistant professor of extension (science and technology). Applications, including curriculum vitae, should be sent by Feb. 15 to: R.E. Brack, Director, Division of Extension and Community Relations, University of Saskatchewan, Saskatoon, Sask. S7N 0W0.

Bishop's University, Lennoxville, Quebec, is seeking both a director of development and alumni affairs and a dean of faculty. Applications, including curriculum vitae, should be sent to: Dr. Hugh M. Scott, Principal, Bishop's University, Lennoxville, Quebec J1M 1Z7. ○

Next Week at Guelph

THURSDAY, Jan. 22, 1987

Worship - ECUMENICAL CAMPUS MINISTRY, Meet and Eat, noon to 2 p.m., PCH; THE SPIRITUALITY OF RELATIONSHIPS, SEXUALITY AND MARRIAGE, 4:10 p.m., UC 334; COMMUNITY EVENING, 5 to 6:30 p.m., OTAS Lounge, UC Level 5; EXPLORATIONS IN MEDITATIVE PRAYER, 5:10 p.m., Chapel, UC Level 5; SOCIAL EVENING, 6 to 9 p.m., UC 334.

Concert - LE TRIO DE MONTREAL, 12:10 and 1:10 p.m., MacK 107.

Apiculture Club - POLLEN ANALYSIS IN HONEY, John McAndrews, 5:10 p.m., Graham Hall 200.

Continuing Education - HOW TO LEARN A LANGUAGE, 7 p.m., register Ext. 3956/3957.

Dance - THE MIDNIGHT RAMBLERS, 8 p.m., PCH, sponsored by the UC.

FRIDAY, Jan. 23, 1987

Worship - ROMAN CATHOLIC MASS, 8:10 a.m., Chapel, UC Level 5.

Gerontology Research Centre Seminar - DISCUSSIONS IN BIO-ETHICS SERIES: A CHRONIC PROBLEM and THE OLD PERSON'S FRIEND, NFB films, 12:10 p.m., UC 334.

Film - THE YEAR OF LIVING DANGEROUSLY, 8 p.m., MacN 105, \$2.50.

SATURDAY, Jan. 24, 1987

Human Kinetics Symposium - HURDLES TO HEALTH, HEALTH ISSUES FOR CHILDREN, 9 a.m., MacN 105.

Dinner/Dance - SCHOOL OF HUMAN BIOLOGY, 7 p.m., Cutten Club.

SUNDAY, Jan. 25, 1987

Worship - ROMAN CATHOLIC MASS, 10:10 a.m., PCH; ECUMENICAL CAMPUS MINISTRY (Anglican, Presbyterian, United), 10:30 a.m., Chapel, UC Level 5.

Sunday Afternoon Walk - SNOWSHOES, 2 p.m., Nature Centre.

International Cinema - TIME STANDS STILL (Hungary), 8 p.m., MacN 105, \$2.

MONDAY, Jan. 26, 1987

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301; JOB HUNTING WORKSHOP, 7 p.m., register at Connection Desk, UC Level 3, by 4 p.m.

Worship - INQUIRY INTO CATHOLICISM, 4:10 p.m., UC 332; ROMAN CATHOLIC MASS, 5:10 p.m., Chapel, UC Level 5.

Marxist-Leninist Study Group - NATIONAL PSYCHOLOGY AND PROBLEMS IN CULTURE, 7 p.m., UC 332.

Continuing Education - BUSINESS COMMUNICATIONS IN FRENCH, 7 p.m., register Ext. 3956/3957.

Relaxation Classes - REGISTRATION, 7:30 p.m., HB 209.

TUESDAY, Jan. 27, 1987

Worship - ECUMENICAL CAMPUS MINISTRY, Know Your Bible, noon, UC 444; ROMAN CATHOLIC MASS, 12:10 p.m., Chapel, UC Level 5; SCRIPTURE ALIVE! 4:10 p.m., UC 334.

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301; LEARNING/WORK STYLES TESTING, 1 p.m., register at Connection Desk by 11 a.m.; WRITING ASSISTANCE, 5:30 to 9 p.m., Lib 359; MATHEMATICS PROFICIENCY COURSE, 6 to 9 p.m., register at Department of Mathematics, Level 5, MacN.

Our World - PALESTINE, ISRAEL AND LEBANON, 12:10 p.m., UC 442.

Land Resource Science Seminar - LAND MANAGEMENT PROBLEMS IN CANADA'S LARGEST NATIONAL PARK, Ross Wein, 3 p.m., LRS 124.

Physics Seminar - WEYL, GHOSTS AND PHYSICAL GAUGES, George Leibbrandt, 4 p.m., MacN 113.

Continuing Education - DESKTOP PUBLISHING: COMPUTER GRAPHICS; THE WONDER OF BIRDS; FRENCH II, 7 p.m.; THE WRITING EXPERIENCE: THE PROCESS AND PRODUCT, 7:30 p.m., register Ext. 3956/3957.

WEDNESDAY, Jan. 28, 1987

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301; CAREER ASSESSMENT SERIES, 2 p.m., register at Connection Desk by noon; ASSERTIVENESS TRAINING GROUP, 5 to 7 p.m. (four weeks), \$3, register at Connection Desk by 4 p.m.; WRITING ASSISTANCE, 5:30 to 9 p.m., Lib 359.

Concert - MARCEL AYMAR, noon, PCH.

Biochemistry Seminar - HEMICELLULOSE UTILIZATION BY YEASTS, Hung Lee, noon, MacN 222.

Worship - ECUMENICAL CAMPUS MINISTRY, Holy Communion, 12:10 p.m., Chapel, UC Level 5; THEOLOGY FROM EXPERIENCE, 7:30 p.m., UC 332.

Continuing Education - INTRODUCTION TO MANDARIN (CHINESE), 6:30 p.m.; FRENCH IV; SPANISH II; INTERMEDIATE CONVERSATIONAL SPANISH, 7 p.m.; THE CANADIAN RENAISSANCE: EVENINGS WITH CANADIAN WRITERS, 7:30 p.m.; CHINA: INTRODUCTION TO THE DRAGON, 8 p.m., register Ext. 3956/3957.

OVC Evening Business Management Program - PERSONAL ORGANIZATION SKILLS, TIME PRIORITY MANAGEMENT, Drew Mitchell, 7 p.m., OVC 508.

THURSDAY, Jan. 29, 1987

Worship - ECUMENICAL CAMPUS MINISTRY, Meet and Eat, noon to 2 p.m., PCH; COMMUNITY EVENING, 5 to 6:30 p.m., OTAS Lounge, UC Level 5; EXPLORATIONS IN MEDITATIVE PRAYER, 5:10 p.m., Chapel, UC Level 5.

Concert - LIANA LAM, piano, 12:10 and 1:10 p.m., MacK 107.

Apiculture Club - POT LUCK DINNER, contact Richard Gagne, 823-8773, evenings, for details.

Continuing Education - WINE APPRECIATION I; FRENCH I; FRENCH III; SPANISH I, 7 p.m.; CALLIGRAPHY II, 7:30 p.m., register Ext. 3956/3957.

Lecture - COMPUTERIZATION OF SPATIAL DATA: ITS POTENTIAL EFFECT ON LANDSCAPE/LAND USE PLANNING DECISION MAKING, Julius Gy. Fabos, 7:45 p.m., Mac Hall 149.

Volleyball - WOMEN VS. WATERLOO, 8 p.m., AC.



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Inside this issue:

The good, the bad and the ugly revealed in parking report. Matthews announces remedies. (See story, page 4 and 5).

University to honor two at convocation

Nobel Prize-winning chemist Dr. Henry Taube of Stanford University will receive an honorary doctor of science degree at winter convocation Feb. 6, and Dr. Dennis Howell, chairman of Guelph International Development Consultants (GIDC) and former dean of OVC, will be made an honorary fellow of the University.

Taube received the Nobel Prize in 1983 for his work on the mechanisms of oxidation-

reduction (redox) reactions, particularly those of transition metal ions. He is also the recipient of many other awards, including the U.S. National Medal of Science in 1977; the American Chemical Society's highest award for chemistry, the Priestly Medal, in 1985; Guggenheim Fellowships in 1949 and 1955; the National Academy of Sciences Award in Chemical Sciences in 1983; and the Allied Chemical Award for Excellence in Graduate Teaching and Innovative Science in 1979.

On faculty at Stanford since 1962, Taube has held the Marguerite Blake Willis professorship since 1976 and has been department chairman twice. Born in Saskatchewan, he earned his B.Sc. and M.Sc. at the University of Saskatchewan and his PhD at the University of California, Berkeley. He has an honorary LLD from the University of Saskatchewan, an honorary PhD from the Hebrew University of Jerusalem, and honorary D.Sc. degrees from the University of Chicago, the Polytechnic Institute of New York and the State University of New York.

Taube is a member of the National Academy of Sciences, the American Academy of Arts and Sciences and the American Philosophical Society, and is on the editorial boards of *Bioinorganic Chemistry*, *Chemical Kinetics* and *Inorganic Chemistry*.

Howell, who was named to the Order of Canada in 1986, was dean of OVC from 1969 to 1979. Following his term as dean, he served as acting director of the Centre for International Programs before becoming head of external projects for the centre. Since January 1986, he has been chairman and chief executive officer of GIDC, which was established to develop, promote and market the University's expertise internationally.

From 1974 to 1978, Howell headed a joint project of the the University and the Canadian International Development Agency for the development of the Faculty of Veterinary Medicine and Animal Science at Universiti Pertanian Malaysia. In 1975, he was involved in a feasibility study for the Higher Education Commission in the Atlantic provinces, which resulted in the establishment of a school of veterinary science in Prince Edward Island. He was chairman of the board of trustees at



Henry Taube

Algoma University College from 1976 to 1985, and is a recipient of the college's honorary D.Sc. degree.

Howell graduated MRCVS with honors and a B.Sc. in veterinary science from the University of London Royal Veterinary College. He has a diploma in bacteriology from the University of Manchester and a PhD from the University of London. He is a fellow of the Royal College of Veterinary Surgeons, the Royal Society of Medicine and the World Academy of Arts and Science. In 1983, he received the XII International Veterinary Congress Prize of the American Veterinary Medical Association.

Howell will be honored at the 10 a.m. morning ceremony, and Taube at the 2:30 p.m. ceremony. Both ceremonies will be held in War Memorial Hall.

Taube will give a free, open seminar on "New Chemistry of Pentaammineosmium (II): An Interface Between Organo-metallic and Traditional Co-ordination Chemistry" Feb. 5 at 2:15 p.m. in Room 113, MacNaughton building. This will be followed by a reception from 4 to 6 p.m. in Room 441, University Centre. For more information, contact Prof. Bob Balahura, Chemistry and Biochemistry, Ext. 3865. O



Dennis Howell

Trial interdisciplinary program aims to attract brightest students to physical sciences

by Sandra Couch

The University's share of the best and brightest first-year students in the physical sciences could well increase with the introduction of a challenging, interdisciplinary, one-year pilot project called MPC² (for Mathematics-Physics-Chemistry-Computing Science), says Prof. Ernie McFarland, Physics.

McFarland, chairman of the College of Physical Science's interdisciplinary curriculum committee, says the basic introductory courses now in place were designed to serve all the students in classes that often reach 300 in size. Very bright students, the committee found, were not as stimulated as they could have been.

"With the courses as they were, we were not attracting the quantity or quality of students we hoped in areas like physics, chemistry and biochemistry, mathematics, statistics and computing science," says McFarland. The committee took up the project originally conceived by former CPS Dean Jack MacDonald, now vice-president, academic, and it has received trial approval.

The committee has designed a number of new first-year courses, which require a minimum average of 80 per cent for admission. The courses will combine mathematics, physics, chemistry and computing and are structured to foster a better appreciation of the interconnections between the disciplines, says McFarland. The more challenging courses will also enable bright, highly qualified and motivated students to choose one or two additional elective courses in their first year.

He admits the project is a departure from the usual departmental philosophy and says the one-year trial will allow CPS "to crawl before we walk." He says a successful trial and an evaluation at the end could lead to possible joint degrees in the areas of physics and chemistry, or mathematics and computing.

"It could well be the first stage for a number of other interdisciplinary ventures in the college beyond the first-year level," says McFarland. He adds that his current core of about 20 "very bright" first-year students are also enthusiastic about the project. "They are sorry they were born a year too soon."

Acting CPS Dean Rod Gentry says the new intensive program will likely attract more of the best students to Guelph, "because in the sciences, the best students are very selective consumers. They're looking for the best program while they're still in high school." Because of the program's innovative nature, says Gentry, it's likely to grow quickly "as word filters back into the high schools of how successful it is going to be."

McFarland says the strict admission requirements will bring to Guelph physical science students who will challenge the faculty more than ever before. "Many faculty are eager to participate," he says. "They will be interacting with 20 or 30 of the brightest first-year students anywhere."

It was MacDonald's belief that the way physical sciences were being taught was

historical and antiquated that first led him to conceive of MPC². He says the departmental divisions in universities are almost "tribal" in nature and often lead to an arbitrary and artificial division of subject matter. Although it can be argued that some departmental divisions are necessary for organizational purposes, he says, "we pay a price for doing that." Interdisciplinary approaches can provide a much better educational experience for the student, and he'd eventually like to see the program carried into second- and third-year levels.

"This is a very good first step, and if it works, it could be extended and lead to other programs," says MacDonald, who will teach one of the courses himself if his schedule permits. He says the program is consistent with the University's aims and objectives and is also consistent with the learning objectives "in that it takes a holistic viewpoint in the teaching and learning of the material."

MPC² will be offered for the first time in September. ○

Liberal education series begins

Feb. 2

A new Liberal Education series, "Agriculture and Ecology: The New Solitudes," begins Feb. 2 with a presentation and discussion of the same title. Speakers are OAC Dean Freeman McEwen and CBS Dean Bruce Sells.

The theme for the series came out of the recent conference held at Guelph, "Science and Technology in the World Food Crisis." Other topics will include "The Predicament of Human Populations" Feb. 9; "Conflict in the Use of Ecosystems" Feb. 23; and "Green Genes: Revolution or Evolution?" March 2.

Sponsored by the Senate Advisory Committee on Liberal Education, the discussions begin at 12:10 p.m. in Room 442, University Centre. They are free and open to everyone. ○

THE CAMPAIGN



The University of Guelph Staff Association has pledged \$5,000 over the next five years to The Campaign. The money is earmarked for the child care centre, a special project of The Campaign. Above, UGSA president Lloyd Cummins, Maintenance, right, and Sheila Trainer, Zoology, chair of the support staff committee for The Campaign, present the UGSA pledge to President Burt Matthews.

Photo by Herb Rauscher, Illustration Services

Math and science girls

The Department of Physics and the Halton County Board of Education have joined forces to present a program on campus Feb. 17 to encourage Grade 10 and 11 female students from dropping out of mathematics and the sciences, particularly physics, in high school.

The program will demonstrate that the field of physics need not be male-dominated, says Dr. Bonnie Edwards, a sessional lecturer in Physics who is co-ordinating the event with Prof. Ernie McFarland.

Entitled "Girls and Physics," the program will be attended by 24 female students and their parents from four Halton County high schools. The students will take part in hands-on laboratory experiments and lectures in the afternoon and, with their parents, participate in evening discussions led by six women who have careers in physics or engineering.

Parents are included, says McFarland, "because there is no sense convincing a 15-year-old girl to go into the physical sciences if her mother or father is going to say: 'You can't do that — you're a girl.'" It's important that high school girls be made aware at an early stage that they can take advantage of the same opportunities as males, he says.

Mathematics and sciences are prerequisites for a large number of careers, notes Edwards, and by dropping out of these subjects early, girls are eliminating many career opportunities.

If they close too many doors, she says, they could find themselves confined to low-paying jobs.

The program is focusing on Grade 10 and 11 girls, says McFarland, "because it's at this point that they have to make hard decisions about what stream to head down. We want them to keep their options flexible." And, says Edwards, if the girls are targeted when they have not yet finalized their impressions of male and female roles, "we can show them how the roles can be changed."

If the program is successful, it will likely be run again — even though it's difficult to find female role models in physics because so few exist, says McFarland. Less than three per cent of physics faculty in Canada are female. And only 31 of the 132 students enrolled last semester in the University's top-level introductory physics course were women. McFarland says the program organizers had to go outside Guelph to find women who could participate because — with the exception of Edwards — there were none available locally.

The Physics Department is now discussing other ways to get the same message out to the thousands of Grade 10 and 11 girls across the province. This may include videotapes, speaking engagements and increased communication with high school teachers and counsellors, McFarland says. ○

Going for the best-qualified



Keith Alnwick

The immediate goals of Keith Alnwick, the new associate registrar for admissions, are to attract well-qualified undergraduate students and to emphasize that Guelph is a full-service university with diverse, high-quality academic programs.

Alnwick, who came to Guelph in November from Carleton University, where he was assistant director of admissions and academic records, says he expects his department to become increasingly active in recruiting students from across Canada, and in assessing what must be done to make better use of Guelph's liaison resources.

Areas now under review in the department are print publications, audio-visual productions and personal contact with potential students, their parents and high school teachers.

Alnwick says he is still acquainting himself with the ways things are done at Guelph. One of the things he's most impressed with is the University's computer system. "Guelph has one of the largest volumes of admissions of any Ontario university because of the trimester system," he says, "and this computer system allows for speedier assessment of applications and allows the admissions officer flexibility in how to approach them."

Over the next few months, Alnwick plans to reassess section priorities in the department to help staff make optimum use of their time as they address questions of academic assessment, on- and off-campus liaison and publication production. "We'll review everything and try to reconcile it with our objectives, which over the next six months are making speedy and fair decisions on admissions."

Alnwick says he believes Guelph will be able to meet its student enrolment objectives and he looks forward to helping the University do that.

He has a B.Sc. in psychology and a master of education in student personnel services from McGill University. He has also worked as registrar in Carleton's school of continuing education and as a counsellor at Vanier College in Quebec. ○

Women in science topic of careers night

"Career Planning for Women in Science" is the topic of a careers night planned for Feb. 12 at 7:30 p.m. in the Faculty Club. Guest speaker is Dr. Lynda Pinnington of Pinnington Associates of Cambridge, a consulting firm that focuses on applied productivity improvement techniques for business and industry.

Discussants will be Brenda Bonnett, a PhD student in the Department of Veterinary Microbiology and Immunology, and Jan Kaufman, Library, who is on the President's Advisory Council day care task force. It is an opportunity for informal discussion about career development, say the organizers of the event.

This is the second such event to be planned by an informally structured group of women involved in the sciences at Guelph. Profs. Susan McIver, chair of the Department of Environmental Biology, Mary Beverley-Burton, Zoology, and Janet Wood, Chemistry and Biochemistry, have been the main moving forces behind this organization, which has blossomed into a nucleus of about a dozen women, representing all the science colleges at Guelph. They say the group's purpose is to increase awareness about the role of women in science and the opportunities and obstacles they may encounter. It also provides an informal networking system and serves a social function. It enables female students to identify women with careers in their own areas of interest and provides opportunities for informal conversation. "We've avoided creating a formal structure," McIver says. Meetings are held on an irregular basis and

there are no official officers.

In addition to offering careers nights, the group has compiled a list of women in science at Guelph, using the criteria of a degree in science and employment at the university.

Questions raised by the group resulted in the updating of the 1975 report of the President's Task Force on the status of women at the University, which led to the formation of the President's Advisory Committee on Equal Rights for Men and Women at the University of Guelph. This committee, chaired by McIver, plans to release a report in the spring.

Last year's careers night attracted about 120 participants, and the organizers are optimistic that this year's program will be as successful. Students, staff and faculty are all welcome. There is a small charge for admission. ○

AUCC establishes Thailand service

A new Association of Universities and Colleges of Canada service aims to help Canadian universities develop academic exchanges and linkages with universities in Thailand. The service is headed by Robert Clarke, former executive director of the Canadian Centre for Policy Alternatives.

Funding is being provided by the Canadian International Development Agency. Details: AUCC, 151 Slater St., Ottawa, Ont. K1P 5N1, 1-613-563-1236. (Notes from AUCC) ○



A motorist takes to his car roof to scout out a parking space on campus. Plans announced this week should make life a little easier for campus commuters and visitors come September.

Photo by Herb Rauscher, Illustration Services

Campus parking frustrations should be all in the past by the fall if plans announced by President Burt Matthews Jan. 26 are carried through.

In a "Memo from the President" to all faculty, staff and students, Matthews outlined steps to be taken by April for implementation in September. The administration has begun to analyse and put together proposals as directed by the president. Within the next few weeks, Physical Resources is expected to begin developing a plan for construction of an initial 200 new parking spaces, possibly in the ravine adjacent to P19 near the Cutten Club. Financial Services is also to examine the economics of a new three-level parking fee based on a higher fee for closer lots, an intermediate fee and a lower fee for the least desirable lots; a surcharge for spaces reserved for special needs such as research or service vehicle permits; and a level of fees that will, over time, cover the cost of maintaining existing lots and building new ones.

The Standing Committee on Parking will also be reconstituted as an advisory committee on traffic and parking policy. It will develop

and revise policy from time to time, and prepare a handbook on parking rules and penalties that will be circulated widely. The Parking Appeals Committee will also be reconstituted. It will make final decisions on appeals of charges of parking violations, but have no administrative responsibilities.

Matthews said he will be in touch again with members of the University community on these matters, especially about the amounts of the parking fee. He said he believes the changes will result in a parking system that serves the needs of all members of the University and visitors more effectively and with less frustration than in the recent past.

The president is acting on the recommendations contained in the *Report of the Ad Hoc Committee on Traffic and Parking Policy*. Chaired by Prof. Tom Hulland, Pathology, the committee made seven recommendations in its December 1986 report, based on a review of all aspects of the parking system, interviews of the people involved in the operation of the system and a questionnaire sent to all members of the University community.

The committee found a high level of

More spaces, high system recommen

dissatisfaction with the parking system among commuters; most dissatisfied were faculty and those who park in the FACS, Library and University Centre sectors. The committee also found serious dissatisfaction with the fit between work locations and parking lots; a heavy-handed enforcement system that issues more than 9,000 tickets a year; disharmony between the Standing Committee on Parking and those it interacts with; a parking and traffic court that struggles to keep volunteers to conduct business; and a somewhat rigid parking and traffic appeals committee.

Recommendations

The *ad hoc* parking committee recommended:

- That steps be taken immediately to increase the number of parking spaces on the campus. At least 200 of these should be in the ravine adjacent to P19 next to the Cutten Club and another 300 to 400 distributed as needed. The committee said the present system has nearly 1 1/2 parking permits issued for each space available, and commuters are the least provided for, especially at the north end and at the centre of campus. It recommended 100 places for every 105 to 110 permits;
- That a parking system be instituted that increases the number of lot or space classifications by two, and that distinctions between categories be on the basis of willingness to pay for assurances of a space in a specified lot and for convenience. The committee proposed a six-category parking system with two new price premium categories (two- and three-star lots). The remaining three categories would be for storage lots for residence students, pay-as-you-park and research/service lots or spaces. Any commuter with a "handicapped" licence plate should be given an appropriate parking place free of additional charges for prime space. The report also said special visitors (clients and alumni) deserve an accessible and convenient parking spot — if not a free one — when conducting business with the University.
- That parking fees for all categories be increased. The committee also recommended investigating evening parking charges for those who do not hold parking permits. The parking system should be enlarged and be debt-free by 1995, the report said. The questionnaire showed that those who park on campus seem to be resigned to a fee increase, but would resist a charge of more than \$100 per year.
- That the Standing Committee on Parking be reconstituted with terms of reference that emphasize an advisory role, but that the present distribution of membership be retained;

er fees and a friendlier ed in parking report

That the Parking and Traffic Appeals Committee be replaced by a group of three adjudicators with limited administrative concerns. The *ad hoc* committee said it was anxious to do what it could to define a benign, low-profile, adjudicatory system.

That technological developments be monitored for improved parking control techniques. These would identify those entitled to service within the system and those who are not;

That a new handbook of parking rules and penalties be developed and circulated widely, and that every attempt be made to enforce rules but also to reduce tensions and confrontations within the system.

Ideal system

The committee reaffirmed that Guelph should continue to operate a parking system that accommodates all those in the University community who wish to drive to campus rather than move to a system that limits the number of permits available on campus.

An ideal parking system is one that is convenient, as inexpensive as possible and run in a way that keeps minor technical infractions in perspective, said the report. Penalties should be primarily to enforce rules necessary for order and safety. "It is contrary to good planning and operation to have a parking system which is punitive, overly adversarial or inductive, or one which depends for a significant portion of its income on fines or other penalties," said the report. The parking administration ought to be neutral in the interest of promoting a sense of community.

Findings

The committee found:

- A parking system that has many sound features but is in need of adaptational repair—a system that gives drivers many entries and exits at heavy traffic times, but precludes the benefits of a limited access system and burdens it with multi-use access demands and a large expanse of pavement. There is a substantial shortage of spaces for regular users and visitors, inadequate signage and a need for repair and/or improvement of lot surfaces and lighting;
- A higher-than-expected level of criticism from commuters who can't find a convenient place to park. The University's first-come, first-served system works best for those who come to work early and stay put. The committee received pleas from faculty, staff and senior employees wanting preferential treatment and more assurance of a place—even at much higher prices;
- Serious dissatisfaction with the fit between work locations and parking lots;

- A system that costs less than most other Canadian universities and one that puts less emphasis on the status of those who use the system. It also found a system free of debt but one about two years away from deficit financing or a substantial fee increase just to maintain the existing level of services;
- A system that sometimes failed to detect or deal with abuses by some individuals, but one that was, in general, orderly and fair.

Alternative systems

The committee looked at alternative systems and found most inappropriate and too costly, at least for now: electronic gates at \$3,000 and meters at \$300 per installation; staffed kiosks that would raise maintenance fees two to 10 times the present cost; high-rise or underground parking garages at more than \$7,000 per space; a shuttle bus service that would be difficult to organize because of the many scattered buildings on campus; and individual dedication of parking spaces, which would be 20 to 50 per cent more costly in space and more expensive to maintain and control. The committee decided it would not recommend a system involving dedication of spaces for individual commuters.

More locations

The cost of preparing a parking space is \$350 to \$2,000, depending on economies of scale, so the University has little to gain by creating more mini-lots, said the report. It identified four areas for large lots, listed in order of location preference: between Watson Lane and Lot 19; across Stone Road from South Residences and/or expansion of P1 to be used as storage lots; expansion of Lot 30 off Smith Lane; and expansion of Lots 14 and 15 east of the East Ring Road. More spaces will be needed as lots are lost to the new Athletics Centre additions, the Environmental Biology building, the Equine Research Centre, additions to the Pathology building and Phase II of the main OVC building.

Other members of the *ad hoc* committee were Profs. Ted Fletcher, School of Hotel and Food Administration, and Tom Funk, Department of Agricultural Economics & Business; Don Livingston, Alumni Affairs and Development; Lloyd Cummins, Maintenance; undergraduate student Maureen Brown; graduate student Diana Iwaniw; Doug Waterston, President's Office, secretary; and John Mason, director, Administrative Services, resource person.

Copies of the report, which includes an analysis of the University-wide September 1986 questionnaire, are available from Waterston, Level 4, University Centre, Ext. 2138. ○

Senate receives information technology report

Senate received for information a strategic plan for information technology at the University at its Jan. 20 meeting. The report was written by Margaret Beckman, executive director for information, for the Senate Committee for Information Technology.

Senate approved a proposal by the Board of Undergraduate Studies to allow first-year students to enter directly into co-op programs instead of in third or fourth semester. A minimum average of 70 per cent is required to enter the program and to continue after second semester.

A number of additions to graduate, provisional graduate and associated graduate faculty were approved:

Graduate faculty: David Porter, chair, Biomedical Sciences; Dilip Banerji, Thomas Carey, Amelia Fong-Lochovsky, Jim Linders, Jay Majithia, Mary McLeish, Katsumi Okashimo, Antonio Salvadori, Marian Shepherd, Ted Swart, David Swayne and Tom Wilson, Computing and Information Science.

Provisional graduate faculty: David Chiu, Computing and Information Science; and Raymond Kostaschuk and Kiyoko Miyaniishi, Geography.

Associated graduate faculty: Ian Munro, Canadian Centre for Toxicology/Food Science, and George Tai, Agriculture Canada, Fredericton/Crop Science.

Senate also approved the list of undergraduate, graduate and diploma graduands for winter convocation, the establishment of a dean's honors list for the Associate Diploma in Agriculture Program and several changes to the *Graduate Calendar*. ○

Nominations sought for agricultural extension award

The Ontario Agricultural College Alumni Foundation is seeking nominations for the T.R. Hilliard Distinguished Agricultural Extension Award, presented annually to an Ontario resident who is making an outstanding contribution to agricultural extension.

The award consists of a citation, a cash award of \$1,000 to be used for research or education and permanent recognition of the recipient on a plaque at the University.

The award will be made to a resident of Ontario who is engaged in agricultural extension work in government, private industry, agricultural organizations or institutions, at the University of Guelph, or with agricultural producers; or to someone who has made an outstanding voluntary contribution in the area of agricultural extension.

Nominations should be submitted with supporting information by Feb. 28 to OAC Dean Freeman McEwen. The selection committee of university, government and private agricultural organization representatives will announce the recipient by May 1. ○

Courses available for staff development

The employment services and training office in Personnel has arranged a variety of staff development programs for the winter semester. Registrations for most courses will be accepted in the order they are received, beginning Jan. 29. All courses have limited enrolment.

"The Care and Use of Animals in Research and Teaching" is a two-part workshop to acquaint participants with their legal obligations in keeping with the Ontario Animals for Research Act. The workshop will be offered twice — Feb. 10 and 17 and Mar. 10 and 17, from 2 to 4 p.m. Enrolment for both is limited to 12.

A half-day workshop aimed at helping committee secretaries improve the efficiency of minute-taking and the quality of finished minutes is Feb. 19 from 1:30 to 4:30 p.m. Employees responsible for taking and preparing minutes, particularly those with limited experience in this task, would find this useful. Maximum enrolment is 20.

A half-day "Cardio-pulmonary Resuscitation" course at the heart-saver level is offered Monday through Friday, Feb. 23 to 27, from 8:30 a.m. to 12:30 p.m. Each day will be limited to eight participants, and applicants will be selected for admission on the basis of distribution of skills throughout the University community.

A one-day skill-building program, "Customer/Client Relations at the University of Guelph," is for employees at all levels who are responsible for internal or external customer/client relations. It will provide practical tips and techniques to make the most of customer/client relations and is offered Feb. 23 and again Feb. 27 from 9 a.m. to 4:45 p.m. Enrolment is limited to 24 in each session.

"Resume Writing and Interview Preparation," a half-day workshop, is intended to help participants write effective resumes and function effectively during interviews. It is aimed at support staff wanting to further their

careers, particularly within the University. This workshop is Jan. 29 from 1:30 to 4:30 p.m. and is limited to 20 participants.

Women interested in developing and implementing a personalized career plan will find "Career Planning/Goal Setting for Women" of interest. Participants in this workshop will appraise their own interests, explore career options, set career goals and objectives and identify resources to assist them in meeting their objectives. It is March 6 from 9 a.m. to 4:30 p.m., and enrolment is limited to 20.

"Employment Interviewing Skills" is designed to help managers, supervisors and others responsible for the interviewing and selection of job candidates to improve their skills in this area. It is March 19 from 9 a.m. to 3 p.m., and will be limited to 15 participants.

The how-to's of team building — communication, developing a sense of co-operation, fostering commitment, offering feedback — are the focus of "Building Effective Work Teams." Of interest to academic administrators, managers and supervisors responsible for group leadership, this seminar is limited to 24 participants and is April 14 from 9 a.m. to 4:45 p.m.

"Financial Planning for Retirement" is a three-session series open to all employees with an interest in financial planning. Session I will explain how individuals can begin financial planning by assessing their present financial situation and estimating their retirement income; Session II will look at increasing retirement income; Session III will review points about minimizing income tax and discuss wills and estate planning. These sessions are May 20, May 22 and May 25 from 1:30 to 3:30 p.m.

To register for any program, contact employment services and training, Ext. 3059 or 6598. ○

Our people

Prof. Geoffrey Sumner-Smith, Clinical Studies, was elected president of the Veterinary Association for the Study of Internal Fixation at the association's recent annual meeting in Davos, Switzerland. The association is a worldwide organization of veterinary and medical orthopedic surgeons involved in research, teaching and the surgery of fracture care.

Jim Sinclair of computing system services, operations service group, was recently elected president of the Guelph District Shrine Club. He was sworn in at Rameses Shrine Temple in Toronto for a one-year term. ○

Job opportunities

As of at Guelph deadline Jan. 23, 1987, the following opportunities were available:

Laboratory Assistant, Molecular Biology and Genetics; grant position. Salary: \$5.50 per hour. **Stenographer**, Mathematics and Statistics, temporary part-time to April 1987. Hiring range: \$255.27 to 277.38.

The following positions were available to on-campus employees only:

Custodian 4, Housekeeping Department. Job rate: \$10.70 per hour; probation rate: \$.20 per hour lower than job rate.

DPS III, Animal and Poultry Science. Salary range: \$448.76 minimum; \$519.80 job rate (level 5); \$645.49 maximum.

Assistant Buyer, Purchasing. Salary range: \$348.55 minimum; \$401.64 job rate (level 5); \$497.00 maximum.

It is the University's policy to give prior consideration to on-campus applicants. To determine the availability of University employment opportunities, contact employment services and training, Level 5, University Centre, or telephone 836-4900.

Personals

For Sale: Teak-finish stereo stand; TV stand; steel typist trolley; bird cages; manual typewriter with French and Spanish keys; desk lamp, 824-1821, evenings. Used downhill and cross-country skis, Gwen or Mark, 822-0923. Wurlitzer organ, two-keyboard, fruitwood cabinet, 822-3075. 1974 Oldsmobile Omega, Ext. 8786 or 763-2246. Canon 35mm Sureshot, 822-0862, after 5 p.m. Holton alto saxophone, Michelle, 821-3163, after 6 p.m. Women's shoes, grey, 7-1/2B, dark brown, 7-1/2; men's brown shoes, small size 10; tubeless snow tires E 78-14, 821-9147.

For Rent: Three-bedroom house plus cat, July 1/87 to Jan. 31/88, 821-2133.

Available: Professional editing, updating, revision, illustrations and French translations, Jennifer, 822-0858.

Wanted: Lego, especially space Lego, 836-9011. Au-pair position for German high school graduate for up to one year, beginning in summer or fall 1987, 822-2343. German high school student seeks family to live with while attending school in Canada in 1987/88; her family in Germany would accept student in exchange, 824-6218 or 822-2343.



Sarah Hall recently received the Bill Taylor Memorial Scholarship for combined high academic standing and contributions to intramural or intercollegiate sports. Hall is a member of the varsity swim team and one of Canada's top 100 female swimmers. Also pictured, from left, are varsity swim team coach Alan Fairweather, Mike Sutherland, manager of information systems, Alumni Affairs and Development, and David Copp, director of Athletics.

(Photo by Herb Rauscher, Illustration Services)

Briefly

SNOBASH '87, the students' annual winter carnival, offers a "winter wonderland" sponsored by the College of Social Science Jan. 29 with a toboggan race on Johnston Green at 12:30 p.m. and a hayride leaving Johnston Hall at 1:30 p.m. to take cross-country skiers to the Arboretum. A talent fest, presented by French House, the Musician's Guild and the Central Student Association, is at 8 p.m. in Room 103, University Centre. On Jan. 30, there will be a cross-country ski trip to the Molson Ski Park in Barrie. Tickets are \$15 and include food, rentals and instruction, transportation and prizes. The bus leaves the UC at 9 a.m. and returns at 8 p.m. Tickets are available at the UC box office. On Jan. 31 at noon, the snow sculptures on Johnston Green will be judged. The Snobash Wipeout Pub begins at 8 p.m. in the Athletics Centre, with an overflow pub in Peter Clark Hall.

HEALTH FAIR '87, sponsored by the Counselling and Student Resource Centre, is Feb. 9 and 10 in the University Centre courtyard. This year there will be 34 booths offering opportunities for health assessments such as blood pressure and nutrition; computerized lifestyle assessments; and information on birth control, smoking and cancer, alcohol and drug use, immunization and weight control. The University chaplains will take part to assist people in talking about their spiritual health. Although directed at students, the fair will be open to the public.

STREETPROOFING, an informative evening for the entire family sponsored by the Guelph and District Multicultural Centre, is Feb. 9 from 7:30 to 9:30 p.m. at Suite 203, 128 Woolwich St. The evening will feature a talk by Constable Brent Eden, community relations officer with the Guelph Police Department, and the film "Better Safe than Sorry."

THE THURSDAY NOON-HOUR CONCERT Feb. 5, presented by the Department of Music, features Ellen Hargis, soprano, and Barbara Weiss, harpsichord. Hargis, a member of the Boston Camerata, received her undergraduate degree in early music performance from Oakland University and later did graduate work in historical romance linguistics at the University of Michigan. Weiss is co-ordinator of early music at the MacPhail Centre for the Arts and director of the Twin Cities chapter of the American Recorder Society in Minneapolis. She has an undergraduate degree in piano performance from Indiana University and a master of music in early keyboards from the University of Michigan.

Program I at 12:10 p.m. in Room 107, MacKinnon building, will consist of selections of English music from the 17th century, including three songs by William Byrd, "The Lark" by Henry Lawes, Charles Coleman's "Wake, my Adonis, Do Not Die," "Love's Constancy" by Nicholas Lanier and "Gather Your Rosebuds Whilst You May" by William Lawes. Program II at 1:10 p.m. will feature Italian music of the 17th century, including works by Giulio Caccini, Bernardo Storace, Sigismondo d'India, Giovanni Picchi and Claudio Monteverdi.

LIFE AT THE COURT of Queen Elizabeth I is the topic of an illustrated talk by Murdo MacKinnon for the Humanities Association meeting Jan. 30 at 7:30 p.m. in Room 107, MacKinnon building. The evening will include a selection of madrigals presented by a group of singers under the direction of Gerald Manning. Admission is \$2 for non-members, free for members and students.

Continued from page 8.

THURSDAY, Feb. 5, 1987

Apiculture Club - HONEY AND CANDLE SALE, 10 a.m. to 4 p.m., UC courtyard.

Worship - ECUMENICAL CAMPUS MINISTRY, Meet and Eat, noon to 2 p.m., PCH; COMMUNITY EVENING, 5 to 6:30 p.m., OTAS Lounge, UC Level 5; EXPLORATIONS IN MEDITATIVE PRAYER, 5:10 p.m., Chapel, UC Level 5.

Concert - ELLEN HARGIS, soprano, and BARBARA WEISS, harpsichord, 12:10 and 1:10 p.m., MacK 107.

Gerontology Research Centre Seminar - CHILDREN'S REACTIONS TO ELDERLY PARENTS, Melvin Lerner, 12:10 p.m., UC 334.

QUEEN ELIZABETH SILVER JUBILEE AWARDS are intended to encourage young Canadians wishing to become proficient in Canada's second official language to pursue studies in that language. Each scholarship is valued at \$5,000 plus transportation expenses of one return trip between the scholar's place of residence and the university attended. Each member institution of the Association of Universities and Colleges of Canada may nominate one candidate, and the application must be endorsed by that institution. Completed applications are to be returned to AUCC by Feb. 1. Further information is available from the Awards Office.

THE RAITHY MEMORIAL LECTURE in dairy production is Feb. 12 at 10 a.m. at the Arboretum Centre. Speaker is Marshall McCullough, consulting nutritionist and emeritus professor, department of animal science, University of Georgia. His topic is "Optimum Utilization of Nutrients, Feed Ingredients and Additives for High Producing Cows," and will be of interest to dairy producers, people in agribusiness and students interested in dairy production. Admission is free.

THE 10 DAYS FOR WORLD DEVELOPMENT program in Guelph, with the theme "Why Are People Hungry?" plans a video display of films Feb. 2, 3 and 6 from 11 a.m. to 3 p.m. in the University Centre courtyard. A workshop will be held Feb. 4 at 1 p.m. in the Chapel, Level 5, UC. Off campus, there will be a full day of speakers Jan. 31 from 10 a.m. to 4 p.m. at St. Matthias Anglican Church, 171 Kortright Rd. Featured will be MP Bill Winegard and Sister Christine Leyser. On Feb. 1 at 11 a.m., at Chalmers United Church, 50 Quebec St., the film "Vanishing Earth" will be shown, and Lee Holland of the United Church's World Outreach Program will speak. Jorge and Lorentina Federick of Nicaragua will present a full-day workshop Feb. 7 at the Five Oaks Conference Centre, Paris. The 10-day program also features special church services Feb. 8, a workshop Feb. 9 at 7 p.m. at George's Anglican Church, 99 Woolwich St., a lecture by Gideon Musa of Ethiopia Feb. 14 at 2 p.m. at Harcourt United Church, 87 Dean Ave., and a brown bag lunch Feb. 12 at noon at Chalmers United Church with speaker Jorge Federick. For more information, contact the Guelph International Resource Centre, 822-3110, or the individual churches hosting events.

CHINESE NEW YEAR CELEBRATIONS, sponsored by the Chinese Students Association, continue with a display and gift sale Jan. 29 in the University Centre courtyard and a presentation and "lion dance" at noon. Tickets for a banquet Jan. 30 are available in Room 224, UC, and are \$26 each.

KONICA FILM sent to Kodak for processing in a University of Guelph envelope, but containing no return address or name, has been delivered to Illustration Services in Blackwood Hall. The owner may pick them up from the customer desk there.

PROFESSOR EMERITUS John Melby, Political Studies, appears on an ABC television program "Our World: China" that airs Feb. 5 at 8 p.m.

1987 DESK AND WALL CALENDARS are available from the Purchasing Department, second floor, Day Hall, free of charge to members of the University community while supplies last.

CSRC - INTERVIEW SKILLS CLINIC, 1 to 4 p.m., register at Connection Desk by noon.

Lecture - NEW CHEMISTRY OF PENTAAMMINEOSMIUM (II): AN INTERFACE BETWEEN ORGANO-METALLIC AND TRADITIONAL CO-ORDINATION CHEMISTRY, Henry Taube, 2:15 p.m., PS 113; reception to follow at 4 p.m. in UC 441.

The following abbreviations are used in *Guelph*: AC=Athletics Centre; ANNU=Animal Science Nutrition; APS=Animal and Poultry Science; BG&Z=Botany-Genetics-Zoology; CM=Chemistry-Microbiology; CS=Crop Science; CSRC=Counselling and Student Resource Centre; Eng=Albert A. Thornbrough building; FS=Food Science; HAFA=Macdonald Stewart Hall (Hotel & Food Administration); HB=Human Biology; Hort=Horticultural Science; ICS=Institute of Computer Science; JH=Johnston Hall; LA=Landscape Architecture; L/A=Lennox/Addington; Lib=McLaughlin Library; LRS=Land Resource Science; Mac=Macdonald Hall; MacK=MacKinnon building; MacN=MacNaughton building; PCH=Peter Clark Hall; UC=University Centre; WMH=War Memorial Hall.

Next Week at Guelph

THURSDAY, Jan. 29, 1987

Pathology Seminar - SEASONAL AND ENVIRONMENTAL INFLUENCES ON SKIN GROWTH AND THYROID FUNCTION IN BELUGA WHALES, D.J. St. Aubin, 11:10 a.m., Pathology 220.

Worship - ECUMENICAL CAMPUS MINISTRY, Meet and Eat, noon to 2 p.m., PCH; COMMUNITY EVENING, 5 to 6:30 p.m., OTAS Lounge, UC Level 5; EXPLORATIONS IN MEDITATIVE PRAYER, 5:10 p.m., Chapel, UC Level 5.

Concert - LIANA LAM, piano, 12:10 and 1:10 p.m., MacK 107.

Snobash '87, TOBOGGAN RACE, 12:30 p.m., Johnston Green; HAYRIDE FOR CROSS-COUNTRY SKIERS, leaves Johnston Hall at 1:30 p.m., returns to UC after 4 p.m.; TALENT FEST, 8 p.m., UC 103.

Current Issues in Agriculture - THE WINTERHARDINESS OF CROP PLANTS, Bryan McKersie, 4 p.m., CS 121.

Apiculture Club - POTLUCK DINNER, contact Richard Gagne, 823-8773, evenings, for details.

Continuing Education - WINE APPRECIATION I; FRENCH I; FRENCH III; SPANISH I, 7 p.m.; CALLIGRAPHY II, 7:30 p.m., register Ext. 3956 or 3957.

Guelph Committee Against Imperialist War Preparations - THE ILLEGAL AND TERRORIST CHARACTER OF THE TWO SUPERPOWERS, 7 p.m., UC 442.

Lecture - COMPUTERIZATION OF SPATIAL DATA: ITS POTENTIAL EFFECT ON LANDSCAPE/LAND USE PLANNING DECISION MAKING, Julius Gy. Fabos, 7:45 p.m., Mac 149.

Volleyball - WOMEN VS. WATERLOO, 8 p.m., AC.

FRIDAY, Jan. 30, 1987

Worship - ROMAN CATHOLIC MASS, 8:10 a.m., Chapel, UC Level 5.

Snobash '87 - CROSS-COUNTRY SKI TRIP, Molson Ski Park, Barrie, bus leaves UC at 9 a.m., returns at 8 p.m., \$15.

Marxist-Leninist Study Group Seminar - NATIONAL PSYCHOLOGY AND PROBLEMS IN CULTURE, Part 3, 7 p.m., UC 332.

Conference - WORKING IN DEVELOPMENT, 7:30 p.m., MacK 117 (preregistration required).

Humanities Association - LIFE AT THE COURT OF QUEEN ELIZABETH I, Murdo MacKinnon, 7:30 p.m., MacK 107, \$2.

Volleyball - MEN VS. WATERLOO, 7:47 p.m., AC.

Film - REBEL WITHOUT A CAUSE, 8 p.m., MacN 105, \$2.50.

SATURDAY, Jan. 31, 1987

Conference - WORKING IN DEVELOPMENT, 8:45 a.m., MacK third floor (preregistration required).

Snobash '87 - SNOW SCULPTURE JUDGING, noon, Johnston Green; WIPEOUT PUB, 8 p.m., AC; OVERFLOW PUB, 8 p.m., PCH.

Guelph Field Naturalists - GREAT ESCAPE ON SNOWSHOES, 1:30 p.m., Guelph Lake Nature Centre.

SUNDAY, Feb. 1, 1987

Worship - ROMAN CATHOLIC MASS, 10:10 a.m., PCH; ECUMENICAL CAMPUS MINISTRY (Anglican, Presbyterian, United), 10:30 a.m., Chapel, UC Level 5.

Reception - WATERCOLORS by Roy Lefneski, 1 p.m., Faculty Club, UC Level 5.

Arboretum Day - FEBRUARY FROLIC, guided walks, 1 and 3:30 p.m., Nature Centre; concert, 2:30 p.m., Arboretum Centre.

International Cinema - A ROOM WITH A VIEW (France), 8 p.m., MacN 105, \$2.

MONDAY, Feb. 2, 1987

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301; CAREER ASSESSMENT SERIES FOR BA STUDENTS, 2 p.m., register at the Connection Desk, UC Level 3, by noon.

Liberal Education Series - AGRICULTURE AND ECOLOGY, Freeman McEwen and Bruce Sells, 12:10 p.m., UC 442.

Worship - INQUIRY INTO CATHOLICISM, 4:10 p.m., UC 332; ROMAN CATHOLIC MASS, 5:10 p.m., Chapel, UC Level 5.

Interdepartmental Seminar Series in Systematics - USING PAUP TO ANALYSE TRANSFORMATION SERIES: EXAMPLES FROM THE PERILAMPIDAE (HYMENOPTERA: CHALCIDOIDEA), C. Darling, 4:10 p.m., APS 141.

Marxist-Leninist Study Group Seminar - NATIONAL PSYCHOLOGY AND PROBLEMS IN CULTURE, Part 4, 7 p.m., UC 332.

Society for Creative Anachronism - THE DEMISE OF DUELLING IN MODERN ENGLAND, D. Andrew, 8 p.m., Faculty Club, UC Level 5.

TUESDAY, Feb. 3, 1987

Worship - ECUMENICAL CAMPUS MINISTRY, Know Your Bible, noon, UC 444; ROMAN CATHOLIC MASS, 12:10 p.m., Chapel, UC Level 5; SCRIPTURE ALIVE!, 4:10 p.m., UC 334.

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301; JOB SKILLS WORKSHOP, 2 p.m., register at Connection Desk by noon; WRITING ASSISTANCE, 5:30 to 9 p.m., Lib 359.

Our World - AFTER THE HARVEST: NICARAGUAN COFFEE BRIGADE, 12:10 p.m., UC 442.

Land Resource Science - GRAZING AND VEGETATION INFLUENCES ON SOILS IN ALBERTA, John Dormaar, 4 p.m., LRS 038.

Continuing Education - MARKETING YOUR SMALL BUSINESS; THE HUMAN MACHINE, 7 p.m., register Ext. 3956 or 3957.

WEDNESDAY, Feb. 4, 1987

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301; WORLD OF WORK, 1 p.m., register at Connection Desk by noon; WRITING ASSISTANCE, 5:30 to 9 p.m., Lib 359.

Concert - CHINESE NEW YEAR, noon, PCH.

Worship - ECUMENICAL CAMPUS MINISTRY, Holy Communion, 12:10 p.m., Chapel, UC Level 5; THEOLOGY FROM EXPERIENCE, 7:30 p.m., UC 332.

OVC Seminar - VETERINARY ETHOLOGY, Andreas Luescher, 12:10 p.m., CS 508.

VMI Seminar - WILDLIFE RABIES: EPIDEMIOLOGY AND CONTROL RESEARCH IN ONTARIO, Dennis Voigt, 1:30 p.m., VMI 101.

Continuing Education - SMALL BUSINESS FINANCING, 7 p.m.; THE GODDESS IN CONTEMPORARY LITERATURE, 7:30 p.m., register Ext. 3956 or 3957.

OVC Evening Business Management Program - BUDGETING, BOOKKEEPING, CASH FLOW, Bruce Karcher, 7 p.m., OVC 508.

Theatre - LIFE AFTER HOCKEY, Kenneth Brown, 8 p.m., WMH.

Continued on page 7.



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OVC Looks Back

Strong personalities and common sense are the hallmarks of a proud heritage. (See stories pages 4 and 5.)

OVC marks a milestone

Many early attempts to establish veterinary schools in North America failed, both before and after Dr. Andrew Smith set foot on Canadian soil, yet the Ontario Veterinary College he founded in 1862 is now the oldest school in continuous operation on this continent.

This college had something the others lacked: Smith's foresight to begin with a practical four-week course for farmers to "make them acquainted with the principles of their important art" and a close relationship with both the government of Upper Canada and later the provincial government.

At first, Smith offered his teaching free, with the first lecture delivered in Toronto on Feb. 12, 1862. His practical approach to the "art" of veterinary medicine soon filled the lecture hall. He graduated his first three students in 1865 and never looked back.

OVC does look back, however, on occasions such as its 125th birthday, which will be celebrated next Thursday with a special lecture to commemorate Smith's inaugural address. Dr. William F.H. Jarrett of the Glasgow Veterinary School will speak in War Memorial Hall at 3 p.m. on "Vaccination Against Retroviruses: From FAIDS to AIDS." The lecture will kick off a year of festivities planned to celebrate the anniversary.

Classes at OVC will be cancelled at 3 p.m. Feb. 12 so that students, faculty and staff can attend Jarrett's lecture.

The second major event will occur during Alumni Weekend in June — the opening of a new teaching/surgical hospital that will rank as one of the finest large animal facilities in the world. The \$13.5-million expansion will include a laboratory teaching block that will permit clinical teaching activities for second- and third-year students to be removed from the hospital's public clinic areas. Students will benefit from televised surgery and specialized diagnostic areas fitted with ultrasound, xerography and the latest in performance testing equipment.

The new building, coupled with renovations to adjoining areas, will provide separate admission, examination and surgical areas for horses and food animals. There will be additional space for offices and computer teaching labs, and the new building will become headquarters for the Veterinary Medical Information Management System. Tours of the



ESTABLISHED 1862.

40, 42, 44, AND 46 TEMPERANCE STREET,
(NEAR BAY STREET)

TORONTO

new facilities will be offered in the afternoon and on June 20, Family Day, when special demonstrations are planned.

As part of Homecoming activities, the University will recognize OVC's academic commitments with a special convocation Sept. 25. It will combine the presentation of four honorary degrees and the annual Schofield Memorial Lecture.

The college also hopes it will be an appropriate time to begin a tradition, says Martha Leibbrandt, co-ordinator of communications, OVC dean's office. The OVC Anniversary Conference will host the annual meetings of the major veterinary associations and academies. OVC faculty and the Division of Continuing Education, with the assistance of the associations, plan to mount an annual

continuing education session.

This will also be an opportunity for many practitioners to return to their alma mater, says Leibbrandt. The college plans to treat them to an old-time cafeteria-style supper in Creelman Hall. Plans include an evening of nostalgic musical entertainment in War Memorial Hall featuring OVC talent and a dance hosted by current students.

OVC will take its anniversary celebration to the people of Ontario with a special display that reviews its history and accomplishments. The exhibit had its debut last weekend at the Society of Ontario Veterinarians' convention in Toronto, will be on display during College Royal and will travel to Montreal in August for the 23rd World Congress of Veterinary Medicine. ○



Jean Pigott, head of the National Capital Commission, right, with Walter Kehm, director of the School of Landscape Architecture, left, and Jaap Schouten, director of planning, NCC.

(Photo by John Majorossy, Illustration Services)

Jean Pigott, head of the National Capital Commission (NCC), was a guest of the School of Landscape Architecture Jan. 23 as part of a cross-country tour to discover what Canadians want their national capital to represent.

From data collected so far, the NCC has drawn up a new mandate — to create a meeting place; to explain Canada to Canadians and the international community; and to safeguard and preserve important buildings and features of the capital.

Ottawa is truly a national city, Pigott said, and she suggested that at some time in the future it may be made a neutral region. The NCC works with 26 mayors, two regions and two provinces, she said, and this complexity

could be reduced by making Ottawa-Hull a neutral region.

Pigott said she is "gathering the dreams of Canadians." In 1984 she was asked why nothing happened at the Peace Tower on New Year's Eve, so the following year, she instigated a party that was attended by 15,000 people. A second party in 1986 attracted 20,000 people and started a new tradition — CBC television cameras now focus on the Peace Tower instead of New York's Times Square.

Pigott told of a young Inuit woman who asked to have her picture taken with her hands on the Peace Tower because she had "touched the heart of Canada" and wanted to share it with the people in her village.

The NCC has also put much planning into the "Ceremonial Way," a terracotta official national street to take visitors past the capital's landmarks.

Pigott encouraged undergraduates to think in terms of the contributions they can make to the beautification of the capital. Landscape architects will be necessary to "feed the souls of Canadians," she said. ○

Computing Services offers free seminars

Computing Services is offering a series of free seminars for campus computer users. All seminars are two hours and are in Room 212, ICS building. To register, call Ext. 8888 or drop in to Room 204 in the ICS building between 8 a.m. and 9 p.m. Monday through Thursday, or between 8 a.m. and 5 p.m. Friday.

Seminars scheduled for February are: "CMS Basics," Feb. 9 at 1 p.m.; "CMS File Management, Feb. 11 at 1 p.m.; "CMS Communications," Feb. 6 at 9 a.m., repeated Feb. 13 at 1 p.m.; "NOMAD Reporting," Feb. 12 at 11 a.m.; "NOMAD Database Creation," Feb. 6 at 1 p.m., repeated Feb. 13 at 11 a.m.; "SAS" (a multi-session seminar), Feb. 16, 17 and 18 at 1 p.m.; "SAS/GRAPH," Feb. 19 at 1 p.m.; "SAS/PC," Feb. 6 at 11 a.m., repeated Feb. 20 at 1 p.m.; "DBASE III," Feb. 16 at 9 a.m., repeated Feb. 19 at 9 a.m.; and "WORDPERFECT," Feb. 9 at 9 a.m., repeated Feb. 12 at 9 a.m.

For a description of what each seminar covers, contact Computing Services support group at Ext. 8888. ○

Our people

Prof. Reid Kreutzwiser, Geography, has received a grant of \$8,490 from the Ontario Ministry of the Environment for research into water conservation. The two-year study will be based on a survey of water managers of Ontario municipalities. It will identify factors affecting the commitment of municipalities to water demand management and will provide the groundwork for improvements to water conservation practices. ○

Norman Lightfoot, Media Productions, attended the official opening of the Robert Bateman Art Show at the Smithsonian Institute, Washington, D.C., Jan. 16. Lightfoot's film "The Nature Art of Robert Bateman" is part of this display, which runs until May. ○

Some 95 graduate and 411 undergraduate degrees will be presented at two convocation ceremonies Feb. 6 in War Memorial Hall.

The degrees of doctor of philosophy, doctor of veterinary science, master of arts, master of science, master of landscape architecture, graduate diploma, doctor of veterinary medicine and bachelor of arts, honors and general, will be presented at the 10 a.m. ceremony. Also at the morning ceremony, Dr. Dennis Howell, chairman of the Guelph International Development Consultants and former dean of OVC, will be made an honorary fellow of the University.

At the 2:30 p.m. ceremony, the associate diploma in agriculture will be presented, as well as the degrees of bachelor of science in human kinetics, bachelor of science in agriculture, bachelor of science in engineering, bachelor of landscape architecture, bachelor of commerce, bachelor of applied science and bachelor of science, honors and general. At this ceremony, Nobel Prize-winning chemist Dr. Henry Taube of Stanford University will receive an honorary doctor of science degree.

A reception for the graduates and their guests will be held after each ceremony in Peter Clark Hall, Level 0, University Centre. Robing up for graduands, faculty, the official platform party and dignitaries is in the lower lounge in War Memorial Hall. ○

University organist

Prof. Gerald Manning, English Language and Literature, has been named the first University organist. His first official function will be to play at convocation in War Memorial Hall Feb. 6.

Manning says the position was created because the University decided an official organist was needed occasionally for campus events such as convocations, weddings or funerals, where organ music is required. In the past, he says, "whoever was available" would play, sometimes on short notice.

Manning says he will either play all engagements himself or be responsible for finding someone else. Describing himself as a person "who tries to wear two hats and hopes they don't fall off," he has been on faculty since 1969, is the director of music at Dublin Street United Church and has played the organ at a number of University functions in the past.

Manning is also an occasional music reviewer and has diplomas in music from the Royal Conservatory of Music in Toronto and the Royal Canadian College of Organists. A former president of the Guelph Chamber Music Society, he has kept music a strong component in his life.

"I could have gone into music just as easily as literature," he says. "I had to make a choice." ○

Langford Inc. supports UofG



O.V.C. 5% FEB



SERVING CANADA

ANIMAL HEALTH IS OUR BUSINESS

RIPERCOL



Dr. Andrzej Samusz, left, Technical Representative, and Dr. Greg Hawkins, right, Veterinary Marketing Liason, at the Toronto convention following the announcement of Langford support to The Campaign. (Photo by Marilyn Robinson, Alumni Affairs and Development)

Ontario veterinarians were the first to hear about a commitment to *The Campaign* that will benefit them directly.

At the Society of Ontario Veterinarians' convention in Toronto last weekend, Langford Inc., a Guelph-based laboratory and supplier of animal health products, announced it will donate five cents of every \$1 of its net Ontario sales in February to *The Campaign*, to be used for OVC's continuing education courses for practising

veterinarians. Langford has pledged to repeat this contribution for one month each year during the five-year campaign.

Langford provides about \$150,000 annually in research contracts to the University, has licensed the canine parvovirus vaccine developed here, and is now engaged in development research leading to the manufacture of Guelph's "shipping fever" vaccine. ○

THE CAMPAIGN

Hockey champions

The OAC Aggies hockey team earned the title of tournament champions at the 17th annual Sports Administration Intercollege Hockey Tournament held in Sudbury Jan. 24. It's the first time Guelph has won the tournament. Sixteen teams bid for the championship, which is symbolic of intercollege hockey supremacy in the province. In the championship playoff, OAC beat out Stong College, York University, 4 to 1.

The team consisted of Larry Kropf, Graham McLean, Stu McCann, Ray Carrol, Ed Boere, Kevin McNabb, Wayne Carleton, Dave Nedelko, Steve Hawkins, Dave Vanos, Greg O'Neil, Kevin Hammill, Rob MacDougall, Gary Bertram, Howard Hill, Tim Davidson, Pierre Taillon, Mark Bodenham, Dave Miller, Rob Vaillancourt and John Edgar.

Miller, who plays forward, was named to the all-star team. McLean was named outstanding goalie and most valuable player, and Bertram was selected the most sportsmanlike player.

The team was coached by Prof. Dennis Murr, Horticultural Science, and McCann. Managers were Norm McCollum, Horticultural Science, and Peter Rick.

The champions received a cash prize of \$600 and the Greg McEvoy Memorial Trophy and banner, which is on display in the OAC trophy case in the courtyard of the University Centre. Each player received a Labatt's Breweries hockey equipment bag. ○

Appointments

Margaret Beckman has been reappointed executive director for information technology for a three-year term concluding June 30, 1990.

Prof. Murray Miller, Land Resource Science, has been appointed the first director of the Centre for Soil and Water Conservation as of Feb. 1 for three years ending Jan. 30, 1990.

Wayne Howard, department of agricultural economics, Texas A & M University, will join the Department of Agricultural Economics and Business Feb. 23 in a new position. ○

Letters to the Editor

Longer noon hours?

The University of California at Davis has a great way of prolonging the noon-hour break, allowing people to get lunch and an hour of recreation or attendance at seminars.

The university starts 50-minute classes in the morning on the hour (e.g. 8 a.m.) and concludes morning classes at 11:50 p.m. In the afternoon, 50-minute classes start at 10 minutes past the hour (e.g. 1:10 p.m.) The noon break is thus 80 minutes.

Adoption of this procedure would improve the quality of life at our University.

Prof. John Prescott
Veterinary Microbiology
& Immunology.



The 1987/88 executive of the University of Guelph Staff Association was elected Nov. 20. Seated, left to right, are Alan Miller, Engineering, secretary-treasurer, and Lloyd Cummins, Physical Resources, president. Back row, left to right, Mary Ann Robinson, Printing Services, first vice-president; Sheila Trainer, Zoology, second vice-president; Martin Hodgson, Engineering, past president; and Ruth Switzer, Graduate Studies, recording secretary. Absent was Jennifer Reader, Chemistry and Biochemistry, chief representative. The UGSA office is located in Room 348, University Centre, Ext. 8727.

(Photo by Herb Rauscher, Illustration Services)

125 years of teaching and research

by Mary Dickieson

When Andrew Smith enlisted Duncan McEachran to assist with lectures in his veterinary school, he may not have foreseen the clash of personalities and viewpoints. Although both were 1861 graduates of the Edinburgh Veterinary School, on which Smith's Toronto college was modelled, McEachran didn't believe the entrance requirements were high enough. In fact, there weren't many.

When Smith refused to upgrade educational prerequisites, McEachran started his own school in Montreal. It closed in 1903, despite an affiliation with McGill University. Smith's enterprise, now the Ontario Veterinary College, is the oldest veterinary school in continuous operation on this continent.

The time was ripe for Smith and his "common sense" approach to veterinary practice and instruction, which advised his students to "take your time, gentlemen, and look this animal over before you give your diagnosis."

Appointed by the Upper Canada Board of Agriculture, Smith operated the college initially as a private college, later by charter, from 1862 until his retirement in 1908. The first lectures were free to any interested young farmer. The first students graduated as a class of three in 1866, receiving a diploma for the completion of a two-year course covering anatomy, physiology, *materia medica* and surgery.

By the end of the century, almost 160 students a year were graduating. Tuition fees were gradually raised to \$60 for a six-month session, and \$5 for dissection room and registration. Students had to find their own dissecting material and the \$3 to \$5 cost per

horse was usually shared. The 250 students enrolled required up to 100 specimens each year. The Temperance Street college was the site of almost constant movement of animals in and out and afforded many opportunities for student pranks.

Smith's successor, Edward Grange, inherited Smith's discipline problems but not his school structure. In 1908 the college became a provincial government institution and was affiliated with the University of Toronto.

Students protested in 1913 when W.J.R. Fowler resigned from the faculty over a salary disagreement with Grange. Although 150 students signed a petition and some threatened to withdraw from the school, Fowler did not return until some years later. He eventually taught at OVC for 55 years, under five different principals. He was a favorite among students, and distinguished himself as one of the first to practise and teach large animal surgery.

The *Toronto Daily Star* was sympathetic to the students' petition for Fowler, but it chastised them for a 1915 incident at the Star Theatre. The paper reported that a group of men from the veterinary school overwhelmed the doorkeeper to gain admittance to the burlesque show and were fined \$5 each for their "disgrace to the institution." With this same kind of spirit, OVC graduates also swelled the ranks of the Canadian Veterinary Corps during the First World War.

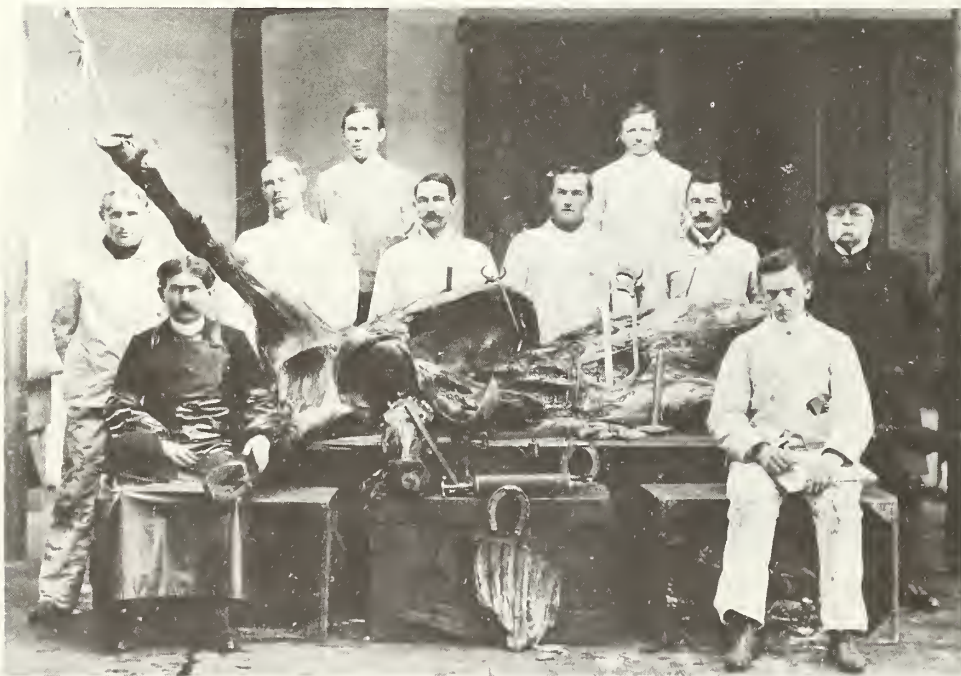
Move to Guelph

The occupancy of new facilities built on University Avenue in 1914 was short-lived. The war signaled a change in the social life of



Prof. Joanne Cockshutt examines a Dalmatian, one of the 8,000 patients treated last year in OVC's small animal clinic.

(Photo courtesy of OVC)



Andrew Smith, far right, poses with a class in the infamous dissecting room on Temperance Street.

(Photo courtesy of OVC)

the country that was not lost on principal Charles McGilvray, who came to the college from Winnipeg in 1918. Known as a man who got things done, he pushed for the 1920 Veterinary Practice Act requiring that veterinarians be licensed to practise in Ontario and effectively dissolved the legendary London Veterinary Correspondence School, a perennial thorn in the side of OVC. He extended the college curriculum to four years and strengthened ties with the University of Toronto by adopting matriculation entrance requirements. He also opened OVC's doors to women by admitting the first female student in 1924.

McGilvray pushed to relocate the college in Guelph in 1922, a move that paved the way for the future. Located across the street from OAC, it now had access to a large number and variety of farm animals. The once horse-oriented veterinary training centre turned its attention to the needs of a more mechanized society demanding the products of food-producing animals.

The student body left much of its daredevil reputation in Toronto. Perhaps the financial restraints of the Depression years and the more demanding curriculum left them less inclined to mischief. Nevertheless, at least one student paid his way through college by playing poker.

Dr. Cliff Barker, OVC's historian, remembers his own freshman initiation in 1937 when he

for the veterinary medical profession

was required to wear a black and white beanie and tie and carry a large bone. Students still had to buy their own equine skeleton, usually from upper classman who wouldn't bother to mention the missing bones.

Under the direction of two more principals — Andrew MacNabb (1945-52) and Trevor Jones (1952-68), the college grew into an active student training and research centre. Expansion of the physical structure provided buildings to house swine, fur-bearing animals and poultry. Classrooms, laboratories, a museum and infirmaries and surgical areas for both small and large animals followed.

While Canada's economy was recovering in the late 1920s, McGillvray admitted larger numbers of American students to ensure continuation of the college. By 1952 the total number of graduates had exceeded 5,500; there was a four-year enrolment of 272 students and 45 faculty. A quota system of four female students a year was in effect so the women could be booked to work late-night clinic hours in pairs, and the dean's assistant, Jean MacDonald, was kept busy shuffling washrooms and lockers to accommodate the women.

MacDonald, who worked in the dean's office

for 43 years, remembers the excitement of new discoveries and the strong personalities of faculty as the college moved into the international scene. Jones travelled widely, lecturing and providing consulting services to other veterinary training centres, as did many other faculty. Prof. James Archibald was in such demand as a lecturer on surgical techniques that he was once described as having circled the globe on a prostate gland.

In 1974 Dean Dennis Howell, successor to Jones, headed a Canadian International Development Agency project that established a veterinary school in Malaysia, the first in Southeast Asia.

On the home front, first-year enrolment was increased in an effort to meet the Canadian demand for veterinarians. Howell later led a fact-finding commission that recommended the establishment of a fourth Canadian veterinary school in Prince Edward Island.

Despite the professional demand, OVC was not for everyone; one young man from Saskatchewan dropped out a few weeks into his freshman year because he felt crowded by all the trees on campus. Another told Howell that he'd rather be a barber. In the 1980s, when

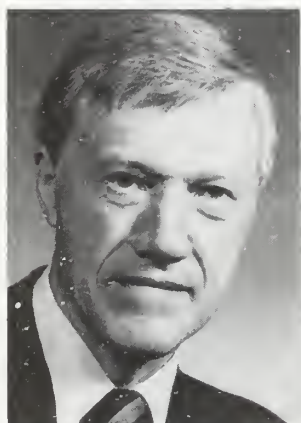
only 100 of the 600 to 700 applications each year are accepted, the criteria for enrolment — a high school diploma, a year of prerequisite university courses, a pre-veterinary year and a successful interview with the admissions panel — ensures that OVC students are the "cream of the crop."

OVC has always maintained close ties with government. Smith's grants from the Upper Canada Board of Agriculture were a contributing factor to his school's early success. OVC began its second century by developing new guidelines for negotiating grants and by establishing a new funding base for the college. Its teaching function remains the responsibility of the federal and provincial ministries of education, but the clinical hospital is now supported by the agriculture ministries.

Despite a freeze on capital funding in the 1970s, OVC acquired new facilities for biomedical sciences, pathology, microbiology and immunology, clinical studies and the OVC branch library.

Ole Nielsen became dean of OVC in January 1985, succeeding Douglas Maplesden, who had led the college into a new era of high tech in both teaching and research. ○

OVC dean addresses issues for the future



Ole Nielsen

OVC could not have survived 125 years without following objectives closely related to the public interest. This also describes the college's game plan for the future, says Dean Ole Nielsen.

OVC's five-year plan, developed last year, will ultimately address broad changes within the veterinary profession:

- Plans to create a department of population medicine will answer the needs of food-producing livestock industries that are developing larger, more intensive operations. Veterinarians now focus on herd health management and the prevention of disease in comparison to their 1875 predecessors who guaranteed a "cure" for each horse's individual ailment;
- Today's veterinarians need more specialized training at the post-graduate level, with

a solid base in the biomedical sciences, says Nielsen, and OVC is committed to providing it. The new thrust for research is in this direction, as scientists seek to understand and manipulate genetic blueprints;

- There is also an increased need for specialists in the areas of environmental health and wildlife management, food inspection and small animals, says Nielsen. Urbanized societies use pets to improve the quality of life. Veterinarians are getting involved in research that investigates the human/animal bond and its potential benefits to the physical and mental health of pet owners;
- Because animals share disease phenomena, he says, observations in animals have been important in achieving progress in medical science — for example, the germ theory and viral causation of cancer. He says the growth of biotechnology and the collaboration of veterinarians with scientists from many other disciplines will put the profession in a unique position to make contributions. Veterinary medicine contributed to a major achievement in public health in this century — the elimination of tuberculosis and brucellosis as dangers to man;
- The observation of disease in both domestic and wild animal populations provides good indicators of what is happening in our environment, says Nielsen. In the future, he says, OVC and the veterinary profession must be concerned with vertebrates more broadly;
- Veterinarians are among the many scientists trying to cope with threats to the environment. Animals throughout the world are at risk due

to compression of their habitats and toxicity, says Nielsen. Both increase the threat of disease. Because one of the profession's prime responsibilities is a global concern for animal welfare, OVC has introduced an ethics course in its curriculum to promote the University's learning objective of moral maturity.

These objectives cannot be reached without financial support and facilities. The added prestige that accompanies the current \$13.5-million expansion to OVC may be short-lived, says Nielsen. The college still has a considerable need for both renovated and new space to meet the current standards for veterinary education and research. In addition to classroom space and library facilities, OVC needs to continually update laboratories if it is to keep abreast of new uses for biotechnology, he says. Developments in animal reproduction, new genetically engineered vaccines and the discovery of new diagnostic agents are happening as quickly as the limitations of space and equipment can be lifted. ○

Obituary

Verna Forster

Verna Forster of Toronto, mother of the late Donald Forster, third president of the University of Guelph, died Jan. 30 at Parry Sound. She is survived by her daughter, Kathy, and son-in-law, Ed Gates, of Parry Sound and four grandchildren. ○

THE FEB. 26 MEETING of Board of Governors has been cancelled. The next meeting is March 26.

WITCHCRAFT - THE ANCIENT RELIGION is the title of a lecture presented by Prof. Ted Cowan, History, and Tammara James of the Wiccan Church of Canada. It is Feb. 11 at 7:30 p.m. in the Faculty Club, Level 5, University Centre. The centre is sponsoring the lecture; admission is \$3.

THE REMBRANDT TRIO with Valerie Tryon, piano, Gerard Kantarjian, violin, and Coenraad Bleomendal, cello, performs at the Department of Music's Thursday noon-hour concert Feb. 12. Tryon has appeared with all the leading orchestras and conductors in England, was a prizewinner at the Budapest Liszt Competition and, since moving to Canada in 1971, plays frequently for CBC radio. Kantarjian, concertmaster of the Toronto Chamber Players, was brought to Canada by conductor Seiji Ozawa to be concertmaster with the Toronto Symphony Orchestra. Bleomendal, a founding member of Camerata Canada, has performed and recorded with many major musicians in this country, including Glenn Gould and Maureen Forrester. He also is heard frequently on CBC radio. Program I at 12:10 p.m. in Room 107, MacKinnon building, will consist of "Duets for violin and cello, Op. 3G" by Gliere and "Trio for piano, violin and cello" by Ravel. Program II at 1:10 p.m. will feature "Duo for violin and cello, Op. 1" by Paganini and "Trio for piano, violin and cello in B Flat Major, Op. GG," by Schubert.

THE JOHN CHARLES POLANYI PRIZES, in honor of University of Toronto's Dr. Polanyi, who received the Nobel Prize in chemistry for his work in reaction dynamics, have been announced by the Ontario Ministry of Colleges and Universities. They are dedicated to ensuring that academic talents flourish in Ontario universities and will be funded by a \$1-million endowment fund from the province. The income from the endowment will be used to provide five prizes a year, awarded on the basis of excellence in doctoral studies in physics, chemistry, physiology or medicine, literature and economic science, and will be awarded to students pursuing post-doctoral studies at provincially assisted Ontario universities.

THE ANNEX STAGE DINNER THEATRE presents Jack Heifner's comedy "Vanities," tracing nine years in the lives of three southern girlfriends from cheerleading high school students to adulthood. "Vanities" opens Feb. 13 at the Annex Stage, 103 Macdonnell St. Call 836-1331 for tickets.

THE SIXTH ANNUAL BIRNBAUM VOLUNTEER WORKSHOP is April 25 from 7:30 a.m. to 1 p.m. Cost of \$15 includes a light breakfast and lunch. Brochures with complete details and registration forms will be available in mid-February at all of Guelph's arts, social service, health and service agencies. Any volunteer wishing to receive a personal mailing should contact Eva Marmurek, workshop co-ordinator, at 824-2410.

A ST. VALENTINE'S DINNER/DANCE, the fifth annual Food Services gala, is Feb. 14 in Creelman Hall, with cocktails at 6 p.m., dinner at 7 p.m. and dancing to the music of Formula at 9 p.m. Tickets at \$55 a couple are available at the University Centre box office and from Food Services, Drew Hall.

THE CANADIAN NATIONAL Model United Nations Conference is May 18 to 23 in Montreal. Presented by the UN Association in Canada, it is designed to acquaint students with the structure, procedural operations and atmosphere at the United Nations; offer insight into the UN's role in world affairs; enhance students' understanding of current world issues, political cultures and foreign policies of various countries; and help them seek out solutions to global problems. Registration fee is \$45 and applications must be in by May 1. Students must be at least 18 and, although the target group is 18- to 24-year-olds, applications from mature students will be accepted. For more information or application forms, contact Susan James, Development Education Program, Ext. 6914.

THE DOMINICAN REPUBLIC EXPERIENCE enables young people to spend part of the summer living with a Dominican family, gaining insights into the economic, political and social realities of a Third World country. The selection process has been extended into March and the cost is \$1,300. For more information, contact Youth Corps, 416-863-6702, or Susan James, Development Education Program, Ext. 6914.

WEEGEE, a photographic exhibition, opens at the Macdonald Stewart Art Centre Feb. 14. Weegee, born Arthur Fellig in 1899 in Austria, adopted the name Weegee to emphasize his ability to obtain scoops — it is a phonetic rendering of Ouija, the board used in seances to foretell events. His images are of life in the big city, particularly of people as revealed when self-absorbed, unaware, or caught in sudden pain, bewilderment or horror.

SCULPTURE PARK DESIGNS, executed by third-semester landscape architecture students, will be shown Feb. 7 to Mar. 1 in the lecture room, second floor, Macdonald Stewart Art Centre.

PARKING LOTS 23/24 AND 44 will be reserved for the use of guests attending convocation Feb. 6. Alternate parking for regular users may be found in Lots 7, 19 (front section), 17 (formerly a blue resident lot), 48 and 14/15.

THE CANADIAN-CUBAN FRIENDSHIP ASSOCIATION holiday tour to Cuba is Mar. 21 to April 4 and provides visits to people's court, a day-care centre, a psychiatric hospital, a retirement home and other social services and community programs. Full payment is required by Feb. 7. For more information, contact Susan James, Development Education Program, Ext. 6914.

A STRESS MANAGEMENT WORKSHOP, offered by the Counselling and Student Resource Centre, focuses on understanding how stress affects an individual and choosing healthy strategies and thinking styles to decrease stress risk. It is Feb. 9 from 6 to 9 p.m.; cost is \$3. Register at the Connection Desk, Level 3, University Centre.

GUELPH FIELD NATURALISTS present wildlife photographer Karl Glockman with his slide presentation "Nature Through the Seasons" Feb. 12 at 7:45 p.m. at the Arboretum Centre.

THE PREDICAMENT OF HUMAN POPULATIONS, Part 2 of the Liberal Education Series, is Feb. 9 at 12:10 p.m. in Room 442, University Centre.

THE RAITHY MEMORIAL LECTURE in dairy production is Feb. 12 at 10 a.m. at the Arboretum Centre. Marshall McCullough, consulting nutritionist and emeritus professor, department of animal science, University of Georgia, will speak on "Optimum Utilization of Nutrients, Feed Ingredients and Additives for High Producing Cows." This talk is of interest to dairy producers and people in agribusiness as well as students. There is no registration fee and no advance registration required.

UNCLE ARTHUR'S SUITCASE is a new publication being produced by and for Student Services, which encompasses Medical Services, Athletics, Residences, the Provost's Office, the Counselling and Student Resource Centre and the Student Environment Study Group. Vol. 1, No. 1, was published in December and plans are to publish monthly, focusing on issues and activities of special interest to Student Services staff.

SOMEWHERE OVER THE RAINBOW is the theme of this year's College Royal Ball March 7 from 8 p.m. to 1 a.m. in the University Centre. Tickets are \$20 per couple and go on sale Feb. 7 at 8 a.m. in the UC courtyard.

INNISKILLIN, presented by Deborah Pratt of Inniskillin Wines Ltd., is being hosted by the Faculty Club, for members only, Feb. 18 at 7 p.m. on Level 5, University Centre. Cost is \$6 plus tax; reservations may be made by calling Ext. 8578.

Continued on page 7.

For Sale: 1982 Dodge 024 hatchback; girl's size 8 white figure skates; men's size 9 JC Higgins skates, 843-5778. Cockatiels, one grey and one white, 822-6307. Kenmore sewing machine; one coffee and two end tables, oak with glass tops, Marg, Ext. 8540 or 836-3516, after 6 p.m. Women's size 5 1/2-6 skates, Chris, Ext. 6739. Child's cross-country ski boots, size 1, Ext. 6518 or 822-4352. Raleigh bicycles, one girl's five-speed and one girl's coaster, 821-0007. Dark grey two-piece down ski suit, size 12 with matching toque and mitts; ski jacket with matching toque, 846-0163, after 6 p.m. Latin texts, hardcover editions of "Virgil Aeneid VI" and "Pliny, Selected Letters," Betty, Ext. 6581. Ice cream, chocolate, vanilla and strawberry, Feb. 6, 2 to 3 p.m., Room 025, Food Science building. Queen-size waterbed with six-drawer pedestal, natural finish, Ext. 2272 or 763-0491.

Wanted: Women's skates, size 6 1/2-7, Linda, Ext. 6579. Day care for infant living in GCVI area, 8 a.m. to 5:30 p.m., beginning April 1987, 836-0586. Home for affectionate, neutered and declawed grey tabby, Yvonne, 821-5956, after 6 p.m. Child's cross-country skis, 160 cm,

and boots, size 3, Ext. 3571 or 822-1819. Exercise bicycle in good condition, Amy, Ext. 3617 or 836-8258, after 5 p.m. Boy's skates, size 6 or 7, Yvonne, Ext. 2920 or 822-2413, after 5 p.m.

For Rent: Three-bedroom townhouse, 1 1/2 baths, eat-in kitchen, available now, Ext. 3416 or 843-4789. Four-bedroom village house and garden, southwest France, fully restored and equipped, July, August, October onwards, Ext. 6535.

Lost: One gold engraved hoop earring Jan. 21 in MacKinnon building, University Centre or in between, reward, Mary Ellen, Ext. 3888.

Available: Graphic artist available for drawings, graphs, figures, etc., Gabrielle, 824-6207. Professional wordprocessing, high quality, fast turnaround, 837-1410 or 822-9945.

"Personals" is a free service offered by at Guelph for staff, faculty and students at the University. All items must be typed, double spaced, and submitted to at Guelph one week before publication.

As of at Guelph deadline Jan. 20, 1987, the following opportunities were available:

Technician, Microbiology Department; temporary full-time until Dec. 31/87. Hiring range: \$338.96 to \$367.24.

Secretary, Computing Services Support Group; temporary part-time, Feb. 13/87 to Aug. 14/87. Hiring range: \$282.66 to \$304.84.

Secretary, Animal and Poultry Science; temporary full-time for about one year. Hiring range: \$282.66 to \$304.84.

VM/CoSy Technical Co-ordinator, Communications Services. Normal hiring range: \$27,956 to \$32,848.

The following positions were available to on-campus employees only:

Laboratory Technician, Human Biology. Salary range: \$461.65 minimum; \$534.73 job rate (level 5); \$664.21 maximum.

Laboratory Technician, Veterinary Teaching Hospital, OVC; temporary full-time, March 1/87 to April 30/87. Hiring range: \$291.19 to \$315.46.

File/Clerk Receptionist Medical Records, Veterinary Teaching Hospital, OVC; temporary full-time, Feb. 25/87 to April 30/87. Hiring range: \$247.17 to \$268.03.

Briefly

Continued from page 6.

ENTREPRENEURSHIP AND YOUR BUSINESS, Series 2, with Donald McQueen Shaver, adjunct professor and entrepreneur-in-residence, will run for four Wednesdays at 3:10 p.m. in Room 141, Animal and Poultry Science building, beginning Feb. 11. Topic of the first session is "Should You Run Your Own Business?" Subsequent topics are "Preparing a Successful Business Plan" Feb. 18; "Starting a Business — Raising the Money, etc." Feb. 25; and "Some Business Opportunities for You to Consider" Mar. 4. Shaver will be available for consultation from Feb. 11 to March 8 and may be contacted through the Department of Agricultural Economics and Business, Ext. 2780 or 3037.

FASHION '87, presented by the College Women's Club, is March 3 at 7:30 p.m. at the Arboretum Centre. Dessert and coffee will be followed by a fashion show; tickets are \$6. Preference for tickets will be given to members and guests until Feb. 15. Rides are available by calling Bev Gilbert, 823-2788.

THE NOMINATING COMMITTEE of the College Women's Club is seeking nominations for the positions of president, vice-president, newcomer chairlady, recording secretary and treasurer. Names should be submitted to Mary Caldwell, 822-4769, Mary McEwen, 824-8847, or Sandra Solomon, 824-7259.

GWYNNE DYER'S LECTURE ON TERRORISM has been re-scheduled for Feb. 18 at 7:30 p.m. in War Memorial Hall. The original date of Jan. 19 was cancelled due to inclement weather. His lecture "False Distinctions" will focus on the similarities among terrorists, freedom fighters and government-sponsored groups. Tickets are \$2 and are available at the University Centre box office, Sam the Record Man, the Bookshelf Cafe, The Corner in Stone Road Mall and at the SAAC and OPIRG offices. Refunds for tickets for the originally scheduled lecture may be obtained from the UC administration office, Room 266, UC, until April 30. The invalid Jan. 19 tickets may not be exchanged for Feb. 18 tickets, and they will not be accepted at the door Feb. 18.

Next Week at Guelph

Continued from page 8.

THURSDAY, Feb. 12, 1987

Raithby Memorial Lecture - OPTIMUM UTILIZATION OF NUTRIENTS, FEED INGREDIENTS AND ADDITIVES FOR HIGH PRODUCING COWS, Marshall McCullough, 10 a.m., Arboretum Centre.

Worship - ECUMENICAL CAMPUS MINISTRY, Meet and Eat, noon to 2 p.m., PCH; **COMMUNITY EVENING,** 5 to 6:30 p.m., OTAS Lounge, UC Level 5; **EXPLORATIONS IN MEDITATIVE PRAYER,** 5:10 p.m., Chapel, UC Level 5.

Concert - THE REMBRANDT TRIO, violin, cello and piano, 12:10 and 1:10 p.m., MacK 107.

OVC's 125th Anniversary Celebration Lecture - VACCINATION AGAINST RETROVIRUSES: FROM FAIDS TO AIDS, William Jarrett, 3 p.m., WMH.

Apiculture Club - INTERNATIONALLY YOURS, U OF G API-

CULTURE DEPARTMENT, Gord Townsend, 5:10 p.m., Graham 200.

Continuing Education - THE NAME OF THE ROSE: MEDIEVAL MORALITY, 7 p.m., register Ext. 3956 or 3957.

Guelph Field Naturalists - NATURE THROUGH THE SEASONS, 7:45 p.m., Arboretum.

Dance - VALENTINE'S PARTY, 8 p.m., PCH, sponsored by the University Centre.

The following abbreviations are used in at Guelph: AC=Athletics Centre; ANNU=Animal Science Nutrition; APS=Animal and Poultry Science; BG&Z=Botany-Genetics-Zoology; CM=Chemistry-Microbiology; CS=Crop Science; CSRC=Counselling and Student Resource Centre; Eng=Albert A. Thornbrough building; FS=Food Science; HAF=Macdonald Stewart Hall (Hotel & Food Administration); HB=Human Biology; Hort=Horticultural Science; ICS=Institute of Computer Science; JH=Johnston Hall; LA=Landscape Architecture; L/A=Lennox/Addington; Lib=McLaughlin Library; LRS=Land Resource Science; Mac=Macdonald Hall; MacK=MacKinnon building; MacN=MacNaughton building; PCH=Peter Clark Hall; UC=University Centre; WMH=War Memorial Hall.

Next Week at Guelph

THURSDAY, Feb. 5, 1987

Apiculture Club - HONEY AND CANDLE SALE, 10 a.m. to 4 p.m., UC courtyard.

Worship - ECUMENICAL CAMPUS MINISTRY, Meet and Eat, noon to 2 p.m., PCH; COMMUNITY EVENING, 5 to 6:30 p.m., OTAS Lounge, UC Level 5; EXPLORATIONS IN MEDITATIVE PRAYER, 5:10 p.m., Chapel, UC Level 5.

Concert - ELLEN HARGIS, soprano, and BARBARA WEISS, harpsichord, 12:10 and 1:10 p.m., MacK 107.

Gerontology Research Centre Seminar - CHILDREN'S REACTIONS TO DEPENDENT ELDERLY PARENTS, Melvin Lerner, 12:10 p.m., UC 334.

CSRC - INTERVIEW SKILLS CLINIC, 1 to 4 p.m., register at Connection Desk, UC Level 3, by noon.

Seminar - PENTAAMMINEOSMIUM (II): An Interface Between Organo-metallic and Traditional Co-ordination Chemistry, Henry Taube, 2:15 p.m., MacN 113, followed by reception, 4 to 6 p.m., UC 441.

Dinner - ENVER'S OF MORRISTON, 6 p.m., Faculty Club, UC Level 5.

Workshop - ENEMIES OF FREEDOM, CULTS IN PERSPECTIVE, Ian Haworth, 7:30 p.m. LRS 124.

Dance - CHALK CIRCLE, 8 p.m., PCH, sponsored by the UC.

FRIDAY, Feb. 6, 1987

Worship - CATHOLIC MASS, 8:10 a.m., Chapel, UC Level 5.

Convocation - GRADUATE DIPLOMA, PhD, D.V.Sc., MA, M.Sc., MLA, DVM and BA, honors and general, 10 a.m.; ASSOCIATE DIPLOMA IN AGRICULTURE, B.Sc.(H.K.), B.Sc.(Agr.), B.Sc.(Eng.), BLA, B.A.Sc. and B.Sc., honors and general, 2:30 p.m., WMH.

Volleyball - WOMEN VS. MCMASTER, 8 p.m., AC.

Film - THE TRIP TO BOUNTIFUL, 8 p.m., MacN 105, \$2.50.

SATURDAY, Feb. 7, 1987

Ticket Sale - COLLEGE ROYAL BALL, 8 a.m., UC courtyard.

Apiculture Club - FIELD TRIP: SMITHVILLE, meet at 9 a.m., Graham Hall 200.

Continuing Education - INTRODUCTION TO LOTUS 1,2,3, 9:30 a.m., register Ext. 3956 or 3957.

Arboretum - NIGHT STALKER'S OWL PROWL, register Ext. 3932.

SUNDAY, Feb. 8, 1987

Worship - ROMAN CATHOLIC MASS, 10:10 a.m., PCH; ECUMENICAL CAMPUS MINISTRY (Anglican, Presbyterian, United), 10:30 a.m., Chapel, UC Level 5.

Sunday Afternoon Walk - SNOW, 2 p.m., Nature Centre.

Concert - WELLINGTON WINDS, featuring the WLU double reed choir, 3 p.m., MacK 107.

International Cinema - ROOM WITH A VIEW, (England), 8 p.m., MacN 105, \$2.

MONDAY, Feb. 9, 1987

CSRC - HEALTH FAIR, 9 a.m. to 4 p.m., UC courtyard; CAREER DEVELOPMENT ORIENTATION, noon, UC 301; STRESS MANAGEMENT WORKSHOP, 6 to 9 p.m., register at Connection Desk by 4 p.m.

Liberal Education Series - THE PREDICAMENT OF HUMAN POPULATIONS, 12:10 p.m., UC 442.

Engineering Graduate Seminar - SLAM: A SIMULATION TOOL, John Ogilvie, 3:10 p.m., Eng. 106.

Interdepartmental Seminar in Systematics - SPECIES; NATURAL KINDS, INDIVIDUALS, OR WHAT? Michael Ruse, 4:10 p.m., ANNU 141.

Worship - INQUIRY INTO CATHOLICISM, 4:10 p.m., UC 332; ROMAN CATHOLIC MASS, 5:10 p.m., Chapel, UC Level 5.

Continuing Education - SINGING FOR NON-SINGERS, 7:30 p.m.; register Ext. 3956 or 3957.

Marxist-Leninist Study Group Seminar - MULTICULTURALISM: THE DENIAL OF NATIONAL CULTURES, Part 5, 7 p.m., UC 332.

TUESDAY, Feb. 10, 1987

CSRC - HEALTH FAIR, 9 a.m. to 4 p.m., UC courtyard; CAREER DEVELOPMENT ORIENTATION, noon, UC 301; WRITING ASSISTANCE, 5:30 to 9 p.m., Lib 359.

Worship - ECUMENICAL CAMPUS MINISTRY, Know Your Bible, noon, UC 444; ROMAN CATHOLIC MASS, 12:10 p.m., Chapel, UC Level 5; SCRIPTURE ALIVE!, 4:10 p.m., UC 334.

Our World - MUSLIMS IN EUROPE, 12:10 p.m., UC 332.

Physics Seminar - THE DYNAMICS AND MECHANISM OF LIQUID CRYSTALLINE PHASE TRANSITIONS, Martin Caffrey, 4 p.m., MacN 113.

Continuing Education - EXPLORING WATERCOLORS; WINSTON CHURCHILL: THE MAN; CONSUMER LAW, 7 p.m., INTRODUCTION TO LOTUS 1,2,3, 7:30 p.m., register Ext. 3956 or 3957.

WEDNESDAY, Feb. 11, 1987

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301; RESUME CLINIC, noon, register at Connection Desk by 11 a.m.; HOW TO STUDY, 7 to 9 p.m., Lib group viewing room.

Concert - A CELEBRATION OF LOVE, noon, UC courtyard.

Biochemistry Seminar - THE EFFECT OF TRANSPORT LESIONS ON PROLINE PRODUCTION in *Escherichia coli* K-12, Bernadette Vink, noon, MacN 222.

Worship - ECUMENICAL CAMPUS MINISTRY, Holy Communion, 12:10 p.m., Chapel, UC Level 5; THEOLOGY FROM EXPERIENCE, 7:30 p.m., UC 332.

Entrepreneurship and Your Business - SHOULD YOU RUN YOUR OWN BUSINESS, Donald McQ Shaver, 3:10 p.m., APS 141.

OVC Evening Business Management Program - COST ACCOUNTING, INSURANCE APPRAISAL AND REVIEW, Bruce Karcher, 7 p.m., OVC 508.

Theology from Experience - SPIRITUALITY AND FAITH DEVELOPMENT OF YOUTH, Kathy Williamson, 7:30 p.m., UC 332.

Lecture - WITCHCRAFT — THE ANCIENT RELIGION, Ted Cowan and Tammara James, 7:30 p.m., Faculty Club, UC Level 5, \$3.

Valentine's Pub - proceeds for Canadian Heart Foundation, 9 p.m., Creelman.

Continued on page 7.



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Inside this issue: The Guelph Spring Festival has been making beautiful music for 20 years. This year's program was announced Feb. 4. See page 5. ○

U of G deserves government recognition for international commitment: Howell

The University of Guelph should receive credit for the work it is doing to develop Canadian international trade and goodwill, and should receive recognition for it by the federal and provincial governments. So said Dr. Dennis Howell, chairman and chief executive officer of Guelph International Development Consultants (GIDC), in his address to the graduating class at morning convocation Feb. 6.

Howell, who was installed as an honorary fellow of the University, said Guelph has a higher profile internationally than any other Canadian university, and an aims document that strongly reaffirms the University's international commitment. And it took a bold and imaginative step by establishing GIDC — a consulting firm whose goal is to increase University opportunities in the international marketplace.

"The governments should recognize in a tangible fashion what the University of Guelph is doing — and can do," he said. The University is committed to allotting people and money to furthering its international causes and objectives, he said, but it cannot be expected to do it alone.

Howell, a former dean of OVC, also said Canada "should be much more mindful of a proper relationship between aid and trade in developing strategies and programs, particularly with the Pacific Rim countries, including China." Canada's principal competitors in international trade lose no opportunity to remind the client governments and countries about the aid contribution they are receiving, but Canadians appear reluctant to link aid and trade, he said.

Howell said he hoped the government will be mindful of these matters when awarding contracts. The essential criterion in awarding international contracts should be merit, with due reference to what the corporations or institutions are doing to promote Canada's image abroad, he said.

Guelph is probably the only Canadian university with structures capable of dealing with major international assignments, said Howell. But because of the long period required for contacts and bridgeheads to be established in a highly competitive situation and in project negotiations, return on investment will take another year or two. In the interim, Guelph is entitled to strong and tangible support from government during this inaugural period.

Howell said the Canadian government has

repeatedly referred to the negative balance between what it is contributing to the work of the international development banks and what it receives back in international contracts in comparison to other developed nations. This University can help rectify the imbalance with its highly marketable expertise, he said.

Continued on page 2.

Dr. Dennis Howell, right, addresses the graduating class. Below, Dr. Henry Taube, being hooded by Barbara Abercrombie, University Secretary, is congratulated by Chancellor William Stewart.



(Photos by Herb Rauscher, Illustration Services)

A case for basic research

A Nobel Prize-winning chemist told the graduating class at afternoon convocation Feb. 6 that there is a need to maintain an environment where university-type basic research can be done.

Dr. Henry Taube of Stanford University, who received an honorary doctor of science degree, said basic research finds a natural place in an academic environment, where no apology needs to be made for being concerned with the fundamental principles of science.

He said academia provides an ideal environment for basic research — a place where the freedom to explore and to publish is fiercely defended and where the movement of new students through the laboratory leads to a continual renewal of enthusiasm, adding to the vitality of the enterprise. "Those who are just

learning are less burdened by dogma and are prepared to see old observations in a new light."

Taube gave examples of basic research that has led to important applications — the development of the laser and the discovery of nuclear fission.

"Scientific activity must be fostered in which the most creative are given the greatest freedom to follow their curiosity," said Taube, who switched from applied to basic research early in his career. "This does not limit the freedom of those who see an opportunity to put a new scientific discovery to use, and this course is frequently chosen by those who make basic advances in science. The important requirement is that those dedicated to basic research have the liberty to chart their own course." ○

EFW plans hinge on environmental study

The University of Guelph favors the Wellington County/City of Guelph proposed site for a \$13-million energy-from-waste (EFW) plant near the northeast corner of Stone and Victoria roads, but it won't support the project if it doesn't get "A" grades in an environmental impact study.

In a letter Jan. 30 to Ken Hammill, co-chairman of the waste management committee, President Burt Matthews said the one-hectare site, which is owned by the provincial government and used by University research stations for crop growing, is within a practical and reasonable distance from the campus central utilities plant, and that the University is a potential buyer of the energy generated from the plant. But, the letter said, University support for the plant on "Site C" — as it is referred to in the *County of Wellington/City of Guelph Waste Management Master Plan Energy-from-Waste Plant Site Selection Final Report* — is conditional upon acceptable results from an environmental impact study.

Matthews says the study, to be commissioned and paid for by the county and the city, would probably take about a year to complete, and that the results would be made public.

He says the University has discussed potential problems related to the facility and has listened to concerns about possible dioxins and furans pollution and outdated government pollution standards. These are issues the study must address, he says.

Prof. Lambert Otten, School of Engineering, who represented the University on the master plan task force along with Bob Davis, Engineering Services, says dioxins and furans are toxic chemicals that form when waste material, primarily plastics, is burned and decomposes. The chemicals are emitted through smokestacks into the atmosphere. They then settle down and degrade slowly on the ground, where they are absorbed by plants, ingested by animals and breathed by humans. The quantities found to date with the most modern technology available are minute, says Otten. John Bull, City of Guelph engineer, agrees: "We're talking trace quantities." With the technology and equipment available today, Bull says, he is confident that the proposed plant would operate well within the strictest guidelines in the world.

The University's carefully worded response

John Hearn

John Hearn, Public Relations and Information, died of cancer Feb. 5 at the Henderson Hospital in Hamilton. For many years, Hearn was a contributing writer to *at Guelph* and the *Guelph Alumnus*.

A man of many talents — author, poet, syndicated columnist, playwright, actor, director, producer and historian — Hearn was well-known in the Guelph community for his commitment to little theatre and volunteer community and church work. ○

to the proposal was the consensus of the Board of Governors' property and management committee, whose resolution was approved by the board's executive committee Jan. 6.

Matthews says the University is really not interested in the proposal from a cost-saving perspective; the University would purchase the steam — about 25,000 pounds of steam per hour year around — at a yet-to-be determined price. But as a good corporate citizen and a leader in environmental consciousness, Guelph feels it has an obligation to help the city and county solve a serious problem, he says.

The site selection report outlined six possible sites, but did not include a comprehensive environmental assessment study. "Site C" is really the only one that could be considered from the University's perspective, says Matthews, and this is the only institution in the city big enough to use the steam produced from the operation.

The University's involvement in the project dates back to March 1986, when the planning and property committee met with city officials after the county and city released the waste management study listing options for waste disposal over the next 25 years. The study said the preferred option was an energy-from-waste plant, with the steam produced from the process being sold to the University. The report said the plant would burn up to 200 tonnes of municipal garbage a day, and that ash from the operation would be buried at the landfill site.

In April 1986, city officials outlined the proposal to Board of Governors. They said it would be best to build the garbage-in, ash-out facility within one kilometre of the central utilities plant on Powerhouse Lane. Davis says it would cost less to build short supply lines and that less heat would be lost in short-distance transportation of the steam. The supply lines would run on the road allowance for Stone Road, he says.

The officials told the board that they favored the site near the University because operation costs would be lower, the customer (the University) has long stability, the site is within city limits, a major waste transfer station would not be required and city sewage and water services were already available. The officials also said the proposal fits nicely into University goals — the preservation of agricultural land, leadership in environmental concerns and reduction of energy costs.

The plant is at least four years away from being up and running, says Matthews. The task force has to firm up its recommendations and address such issues as finances and ownership before it goes back to the public at open meetings, probably this fall. It must then meet again with the University for further reactions. After that, the plan must go to the Ministry of Environment for assessment. The ministry will hold hearings before making its decision, and only then are the city and county free to move ahead with plans towards operation, probably by 1991, says Bull. ○

Love on the networks

Cupid has gone high tech, and romance is flourishing over the computer networks. NETNORTH, the system linking Canadian universities and providing access through Cornell University to the American university network, BITNET, has been the medium for several romances.

About a year ago, Mark McGinnis, a technician in Computing Services, answered a message on NETNORTH from Rob Korb at the University of Florida in Gainesville. McGinnis had conversations with Korb from time to time until one night when Korb's co-worker Beth Daly took over.

Daly was interested in Canada and "the more conversations we had, the more common interests we discovered," McGinnis says. The next step was an exchange of photographs and then Daly spent a week's holiday in Guelph. Both enjoyed the meeting and their relationship continued via the network.

"We then decided we should get to know one another better," McGinnis says, so Daly took a leave of absence from her job and visited Guelph for three months. This visit was so successful that McGinnis flew to Florida for his vacation. Daly's parents arranged a party to introduce him to their friends, and the couple were married Oct. 26, 1986.

McGinnis and Daly say theirs is the fourth marriage that has begun with computer talk on the university networks, and they know of at least two more couples who are now courting. ○

International Continued from page 1.

Howell also addressed the issues of foreign students and foreign student fees. The best ambassadors this country can have in relations with foreign countries are the Canadian alumni, he said, and Canadians must begin to see foreign students as links to those countries where they wish to have long-term and mutually satisfying relations. "This will require a re-examination of our foreign student fee structure and, in some cases, the use of funds for foreign student fellowships."

Howell asked the graduating foreign students returning home to remember the University as a community with which they have a special bond. And he reminded graduates who are beginning a career in Canada that their goals cannot be attained without a continuing concern for the welfare of colleagues in other countries.

Turfgrass institute proposal ready for Senate

The University of Guelph could become a centre of excellence in Canadian turfgrass research, education and extension, if Senate gives the go-ahead Feb. 17 for a Committee on University Planning proposal for a Guelph Turfgrass Institute (GTI).

Sponsored by the University, the Ontario Ministry of Agriculture and Food and the turfgrass industry, GTI would be housed in a turfgrass research and extension building containing offices, a laboratory, plant growth rooms and an information centre. The property and planning committee of Board of Governors has approved in principle a 10-acre site west of the fire hall on Stone Road.

The Ontario Turfgrass Research Foundation (OTRF) has hired an architect and is to launch a fund-raising drive for construction of a one-storey, 3,000-square-foot building at an estimated cost of \$200,000 in 1987 dollars. The money would come primarily from the turfgrass industry, says Prof. Lee Burpee, Environmental Biology, who has been working with colleagues for two years to establish a turfgrass institute.

GTI would support a provincial turfgrass industry valued at more than \$240 million. It would create a favorable environment for research in turfgrass science, an extension program, and courses and seminars in turfgrass production and management at the associate diploma, undergraduate and graduate levels.

"Turfgrass research has gone on well here since its beginnings back in the 1940s," says Burpee. "GTI would put us all together, encourage discussion, help morale, and give us and the turfgrass industry more visibility." Six faculty in three departments — Profs. Chris Hall, Mark Sears, Gerry Stephenson, and Burpee, Environmental Biology; Jack Eggens, Horticulture Science; and Tom Bates, Land Resource Science, are involved in turfgrass research.

In 1985/86, the University's turfgrass scientists spent more than 800 hours on extension activities. Guelph is the only Canadian university that provides associate diploma, undergraduate, graduate and continuing education in a variety of programs associated with turfgrass production and management.

GTI objectives

According to the Committee on University Planning report going to Senate, GTI would have these objectives:

- to expand research programs through interaction with industry, OMAF, the University administration and other sponsoring agencies;
- to co-ordinate extension activities related to the production and management of turfgrass, provide technical assistance to the industry through extension publications, conference speakers, courses, workshops and symposia, and arrange field days and tours of the turfgrass research plots;
- to encourage turfgrass science as an area of graduate education and provide visibility to attract top students; and

- to launch and sustain a fund-raising drive for construction of the building.

During its first three years, GTI would oversee the construction of the building and develop a master plan for renovation of the field plots; focus objectives to meet the long- and short-term needs of the industry; present a proposal for a new faculty position in turfgrass breeding and for technical support in turfgrass pathology; and seek new research support from the Natural Sciences and Engineering Research Council and the Ontario Golf Association.

With an initial annual operating budget of about \$300,000, the institute would consist of faculty and staff now in turfgrass science and an OMAF extension specialist. The faculty and staff would continue to hold appointments with, and be responsible to, their respective academic departments. A director would be appointed by the dean of OAC on a two-day-a-week basis for five years with review by the dean.

An advisory committee made up of representatives from the turfgrass industry, OMAF

and the University would be appointed by the dean of OAC. GTI's operation, objectives and performance would be reviewed after five years. Funding would come from OMAF, the Ontario Ministry of the Environment, NSERC, OTRF and agribusiness.

Applications are now being prepared for an NSERC-industry collaborative grant for research on biological control of weeds and diseases in turfgrass swards; an NSERC strategic grant for research on the fate of pesticide residues in runoff water from grass slopes; and an NSERC University Research Fellowship directed towards the management of water, nutrients and soil physical conditions in turfgrass swards.

The research and extension building, along with the existing field research facilities at the Cambridge Horticultural Research Station, would provide GTI and the industry with one of the finest centres for turfgrass science in the world, says the CUP report.

Senate meets at 8 p.m. in Room 113, MacNaughton Physical Sciences building. ○

IBM impressed with agricultural project

An information session for senior management from IBM Canada Ltd., the Ontario Ministry of Agriculture and Food and the University was held on campus recently to outline what has been accomplished under Guelph's \$1.75-million, three-year co-operative project agreement with IBM. The agreement, one of 20 IBM has with educational institutions across Canada, expires June 20.

One of the goals of the Guelph project was to advance computer literacy among agricultural students and to find applications for computers in agriculture, says Prof. Bruce Stone, associate dean of OAC.

With equipment supplied by IBM and the Ministry of Colleges and Universities, OAC has established seven computing teaching laboratories in the college. And campus researchers have found a variety of applications for computers in agriculture and veterinary medicine, including a program that predicts soil erosion rates and a system for collecting and analysing health and production data on dairy farms.

Computer equipment provided by IBM has also been used to develop a modern database management system for animal records in the Guelph Centre for Genetic Improvement of Livestock and to develop an agricultural extension computer lab serving the information needs of farmers, agribusiness and students.

Guelph's NETNORTH project has also benefitted from IBM's support; nationwide, the firm has contributed \$1.38 million to the university networking system.

Faculty and staff involved in a number of the projects supported by IBM made presentations at the information session. Don Avery, corporate programs manager with IBM, said everyone attending the session "came away with a much



Ron Ziola, vice-president, Ontario/Atlantic region, IBM Canada Ltd., right, with Clay Switzer, Ontario deputy minister of agriculture, and President Burt Matthews.

(Photo by Herb Rauscher, Illustration Services)

better understanding about the project. And the enthusiasm of the faculty at Guelph who are making use of the equipment really came across."

As part of the co-operative agreement, next August IBM and the University will sponsor a campus conference/workshop on the uses of computers in agriculture for members of the Association of Faculties of Agriculture for Canada. ○

Different pathways for the Arboretum

The Arboretum could become a world centre for the conservation of nature, says its new director, Prof. Keith Ronald, Zoology, who assumed the five-year, half-time appointment Feb. 1.

Ronald, the founding dean of CBS, has a strong commitment to environmental issues. He says he has always been concerned about critical habitats and the proper ecological use of land. The fact that he's a zoologist rather than a botanist is insignificant to the job, he says. He has worked with the governments of Turkey, Greece and Libya in setting up national parks and preserves.

Ronald says it's not too far off base to consider the Arboretum as part of a day's tour of natural exhibits in this area. The Kortright Waterfowl Park, the Ontario Agricultural Museum on Highway 401 and the Arboretum could be made into a day-long touring event, with the latter evolving into "the window to the University," he says. The Arboretum could be made into a University showplace, where "we practise what we preach, not just in the classroom."

Ronald would also like to see the Arboretum used for summer lectures by fine art and music students and "philosophers sitting out there under the trees." And he envisions the Arboretum as a meeting place for people interested in the future of renewable resources — a conference centre of world stature attracting annual conservation events.

Ronald emphasizes the need to expand the number and variety of uses for the Arboretum, campus-wide, nationwide and worldwide. He'd like to see more school children exploring the wonders of nature and more of his colleagues taking advantage of the environment and facilities.

Among his immediate plans are an information/education package for distribution outside the University and the encouragement of more research by faculty and students. Whatever changes he plans to implement, Ronald is anticipating the administrative challenge. He says that although he'll likely be following in the footsteps of previous Arboretum directors, "I may be taking a bit of a different pathway." ○

Ollerhead sets agenda for Physics

Prof. Robin Ollerhead's first five years as chairman of the Department of Physics were marked by growth and development in all areas of departmental activity, and he anticipates this will continue in his second term. Ollerhead's reappointment takes effect May 1, but will be broken by a year's administrative leave to Australia beginning this fall.

Looking back over his first term, Ollerhead says he is most pleased by the increased recognition in teaching and research that Physics faculty members have attained, the success of the collaborative Guelph-Waterloo Graduate Program in Physics, and continuing innovations such as the proposal for a microwave link between the universities of Guelph and Waterloo.

During his second term, he says, the department's priorities will include faculty renewal, the development of a new high-quality interdisciplinary undergraduate program in the physical sciences, and continued improvement in both graduate and undergraduate programs.

Ollerhead's leave will be spent at the University of Melbourne, where he will continue research in the area of ion-solid interactions. ○

Martin outlines change at AE&B

When Prof. Larry Martin took over as chairman of the Department of Agricultural Economics and Business on July 1, he came armed with an agenda for change. The department must focus on more research that addresses current problems in agriculture, he says.

"We need to develop a research program that addresses options for the agricultural sector, including production, marketing and policy alternatives." For example, he says, the department should be searching for alternatives to production in the areas that are under pressure, such as the cash grain and tobacco sectors. Martin would also like to see the department working with food scientists to solve marketing problems in the packaging and distribution of food products.

Another area calling for change is management training. "We haven't done a good enough job in teaching producers how to be managers," he says. "There must be more opportunity college wide to learn sound management practices."

A new master's degree in agricultural business management is "one step to improving this whole area of management," says Martin. He also feels the department should enlarge its research on financial and marketing management, and work more closely with extension personnel.

Other changes include career planning for junior faculty members and changes in performance evaluations at the end of the year. He says the idea is to develop short- and long-term career plans for faculty, particularly with respect to research, "so we can better link their performance evaluations at the end of the year with the set of expectations developed at the beginning of the year."

Martin also wants to improve teaching

evaluations, which, he says, distinguish the "poor" teachers from the "good" but do nothing to help the "poor" teachers diagnose their problems and improve their performance.

Also on the department's agenda is implementation of a joint PhD program in resource and environmental economics with the Department of Economics. It is expected to begin in fall of 1988 pending final approval by the Ontario Council of Graduate Studies.

Martin also believes Agricultural Economics and Business should have an industry advisory committee that would critique the department and make suggestions for program and curriculum improvement. ○

Janzen paper honored

An article by Prof. Ed Janzen, Department of Chemistry and Biochemistry, has received the honor of "Citation Classic" from *Current Contents*. This distinction is given to papers that have been cited frequently.

Janzen's article "Spin Trapping," published in a 1971 issue of *Accounts of Chemical Research*, has been cited in more than 515 publications. The honor is "a once-in-a-lifetime thing," he says.

Prof. Bob McCrindle, also of Chemistry and Biochemistry, received a similar honor in 1979 for his article "NMR Solvent Shifts of Methyl Groups in Alicyclic Ketones. Reassignment of the Methyl Groups in Camphor."

Our people

A recognition dinner for retiring Engineering professor **Ross Irwin** is Feb. 28 at 6:30 p.m. Anyone wishing to attend should contact Prof. Hugh Whiteley, Ext. 3634. ○

Christofides charts future for Economics

In a constantly changing world, the Department of Economics is in for its fair share of changes, says newly appointed chairman Prof. Louis Christofides.

One of the major changes in the department will be the implementation of Ontario's first PhD in resource and environmental economics. Final approval by Senate and the Ontario Council of Graduate Studies will soon be sought for the program, which will be a collaborative venture between Economics and the Department of Agricultural Economics and Business.

Christofides, who was on the original committee struck to design the program, says it should attract good students to Guelph and provide training valuable to government, industry and the academic community.

Economics will soon begin a review of its undergraduate program to assess whether an appropriate core-course sequence is in place and whether the curriculum can be improved. "It's a question of fostering certain values," Christofides says.

In the immediate future, the department's greatest challenge lies in recruiting high-quality faculty, he says. Other short-term goals include coping with the growing demands for space by the department's faculty, staff and graduate students, and continuing to recruit first-rate graduate students in an internationally competitive market. ○



Guelph Spring Festival

The Guelph Spring Festival, marking 20 years of making beautiful music, announced its 1987 program in the presence of distinguished violinist Yehudi Menuhin at a press conference at the Cutten Club Feb. 4.

From April 24 to May 15, the festival will bring a roster of stars to Guelph — Jon Vickers, the Orford String Quartet, the Canadian premiere of Mozart's opera "La Finta Giardiniera," Angela Hewitt, Wilson and McAllister, Menuhin and the Camerata Lysy, Gstaad, Karen Kain and Veronica Tennant, the Robert Desrosiers Dance Theatre in "Nightclown," the Canadian Brass and the Theatre Aquarius production of "McClure."

The program:

- Menuhin and the Camerata Lysy, Gstaad, will begin their Canadian tour with a premiere performance of Canadian composer Andre Prevost's "Cantata for Strings" May 8;
- Menuhin and Alberto Lysy will offer master classes May 9 to advanced string students in two sessions to be taped by the CBC;
- Canada's ranking tenor Jon Vickers will give a recital April 24 of Schubert, Mussorgsky and Wolf songs, Canadian folk songs and music from his greatest operatic roles — Peter Grimes and Samson — with the Opera in Concert Chorus, directed by Robert Cooper. His accompanist will be Richard Weitach;
- All 17 of Beethoven's string quartets will be performed in six matinee concerts by the Orford String Quartet April 25 and 26, May 2 and 3 and May 9 and 10. Music critic and broadcaster Ken Winters will put Beethoven's music in perspective in a talk April 25;
- The first Canadian performance of Mozart's opera "La Finta Giardiniera" will run April 29, May 1 and 3. It will be sung in English, translated by Edmund Tracey as "Sandrina's Secret;"
- Canadian pianist Angela Hewitt, winner of the 1985 International Bach Piano Competition, will perform May 2 with the London Sinfonia, conducted by Alexis Hauser. Her program will include works by Bach and Chopin, and the world premiere of Canadian composer Gary Kulesha's "Third Piano Sonata," composed for this occasion;
- Modern dancer Robert Desrosiers will give two performances of "Nightclown" May 6. The principal dancers of the National Ballet of Canada, featuring Karen Kain and Veronica Tennant, will perform May 10;
- Two performances of Munroe Scott's monodrama "McClure" will be given by Wayne Best May 13. Best will re-enact McClure's memoirs of 25 years as a missionary doctor in revolutionary China;
- The Canadian Brass will close the festival May 15 with music by Byrd, Vivaldi, Gabrieli, Mozart, Pergolesi and Gershwin, and a new work by Stephen McNeff;
- Sixty-eight young singers from across Canada will compete for \$13,000 in prize money at the National Vocal Competition May 7. The finals will be held May 9. The finalists will be



Sir Yehudi Menuhin, centre, in conversation with Prof. Terry Crowley, History, GSF president, left, Prof. Ed Phillips, Music, a member of the festival's artistic advisory committee, and Nicholas Goldschmidt, GSF artistic director, right. Crowley says the co-operation between UofG and the festival is an outstanding example of the kind of interface between University and community recommended in UofG's aims document.

(Photo by Herb Rauscher, Illustration Services)

accompanied by the Kitchener-Waterloo Symphony with Raffi Armenian conducting;

- Duo guitarists Donald Wilson and Peter McAllister will entertain at brunch and tea at the Elora Mill Inn April 26. They will perform Pierre Petit's "Toccata" and Wilson's "Popsong," as well as works by Mozart, Granados, Joplin, Tarrega, Mendelssohn, Albeniz and Falla;
- A testimonial dinner for Nicholas Goldschmidt, artistic director of the festival

for 20 years and holder of an honorary degree from Guelph, will be held May 14.

Several other events are planned around the festival, including an exhibition of Canadian artist Ken Danby's work at the Macdonald Stewart Art Centre.

Series subscriptions at discount prices are available. Tickets and information are available from the Guelph Spring Festival Box Office, P.O. Box 1718 or 21 King St., Guelph N1H 6Z9, 821-7570 (toll free 1-800-265-7279). ○

Student applications sought for London Semester

An information meeting for students interested in registering for the 1988 London Semester will be held Feb. 24 from 7:30 to 10 p.m. in Room 029, MacKinnon building. Prof. Leslie Marshall, English Language and Literature, will co-ordinate the semester.

The program offers students in their third or higher semester an opportunity to spend time abroad as part of their regular BA studies. Offered only in the winter semester, the program runs the same length of time as a regular semester at Guelph, and students must carry a regular course load.

Application forms are available from Marshall or the BA academic counsellor's

office, Room 052, MacKinnon building. Applications will be processed in the order they are received. Accommodation in London House will be chosen by lottery in October; other students will stay in nearby lodging.

Courses offered during the 1988 London Semester include "London Studies in the Humanities" and "Literature in London," which will be taught by Marshall. Other likely course offerings are "Drama in London," "Music in London" and "English Art, 1750-1900."

Students unable to attend the information session should contact Marshall in Room 439, MacKinnon building, Tuesday mornings and Wednesday afternoons. ○

Young farmers receive Carr scholarships



OAC Dean Freeman McEwen and Ethel Carr, with Carr Scholarship recipients Paul Harris and Neil McCutcheon, right.
(Photo by Herb Rauscher, Illustration Services)

Two 1986 Guelph graduates who have returned to the farm after finishing their studies — Neil McCutcheon of Owen Sound and Paul Harris of Ripley — received Carr Scholarships Jan. 6.

The \$3,500 awards are made annually from an endowment from the estate of Samuel Leister Carr to graduates whose university career included involvement in campus and community activities as well as a good academic record. The winners must be active farmers with a financial stake in their farm operation.

Carr, who farmed in Etobicoke before urbanization overtook the farm, died in 1971. His scholarships were presented to McCutcheon and Harris by his sister-in-law, Ethel Carr of Mississauga. McCutcheon received the Samuel Leister Carr Scholarship, awarded to graduates of the four-year degree program in agriculture, and Harris received the William Park Carr Scholarship, awarded to graduates of the two-year diploma program in agriculture.

McCutcheon, who took over sole ownership of the home farm from his father Jan. 1, operates a dairy herd of 40 milking cows. In his home community, he has been active in 4-H

projects and has won a number of awards including the Canadian National Exhibition Scholarship in 1983.

As a student at Guelph, McCutcheon was on his class executive and involved in College Royal, the Junior Farmer Club, livestock judging competitions and intramural sports. He was chairman of the Canadian Intercollegiate Judging Competition and a provincial director of Junior Farmers. As an undergraduate, he worked summers with the Ontario Ministry of Agriculture and Food and with commercial corporations to broaden his knowledge of the agricultural industry.

Harris also comes from a dairy farm, where he is building up his stake in the herd based on his 4-H calves and their progeny. He has won a number of trophies and awards in 4-H activities. Since graduation, he has assumed herdsman responsibilities at home, while his father looks after other farm activities. He has also been active in church and athletic activities in his community. At Guelph, Harris was involved in student clubs, athletics, the square dance team and the College Classic auction sale of purebred livestock. ○

Let's communicate among disciplines, say OAC, CBS deans

"Agriculture and Ecology: The New Solitudes?" the first of a four-part liberal education noon-hour series, attempted to reconcile the communication problems between those working in agriculture and agricultural research, and those with ecological concerns.

The deans of CBS and OAC sparked off a lively question-and-answer session that addressed moral, ethical and productivity issues.

OAC Dean Freeman McEwen opened the debate by defining agriculture as the production of plants and animals for the benefit of man, "partly a science, and partly an art." He then defined ecology as the interrelation of organisms with their total environment, adding that man has taken natural ecological systems and distorted them for agricultural purposes. That intentional distortion should not mean, however, that ecological principles are not important, he said.

CBS Dean Bruce Sells argued that the major problem facing ecologists and agricultural researchers today is not that the ecosystem is being distorted by agriculture, but rather that researchers in the two fields do not communicate their concerns to each other. They are too focused in their own areas, and this parochialism means they are not aware of developments elsewhere. And when they do have concerns, he says, they are loathe to contact colleagues in other disciplines because they are intimidated by the jargon and lack of knowledge in areas outside their own fields.

Both deans agreed that all disciplines need a more critical outlook and that there must be a "search within science" to transcend intellectual autonomy among researchers in different, yet fundamentally connected areas. Disciplines do not remain static, so they must look outside themselves to see how they can interact with other groups. Indeed, considering scientific disciplines as solitudes is self-defeating in the long-term, they said. ○

Earthworms in untilled soil may improve corn yields

by Pamela Healey

The humble earthworm may be able to help improve Ontario's decreasing corn yields, according to research by Martin Shipitalo, a PhD student in the Department of Land Resource Science.

Shipitalo became interested in the role of earthworms in soil structure when he examined soil differences after till and no-till farming. He says there's been concern in Ontario over declining corn yields when the crop is grown continuously. Smaller harvests are blamed on deterioration of the soil structure — the way individual soil particles are combined. Researchers are still trying to find out which soil structure is best for plant root growth and high crop yield.

In no-till farming, crops are planted directly into the previous crop residue, which protects the soil from rain, helps preserve soil structure

and increases populations of soil animals such as ants and various beetle species. Shipitalo thinks pores created by earthworms in untilled soil make up for the absence of those created by a plow. The resulting range of pore sizes promotes water movement and root growth.

When earthworms burrow, they ingest soil and plant debris. Chemical bonds that hold soil clusters together are broken down in the worm's gizzard but many polysaccharides (large organic molecules) in plant debris aid in the formation of new clusters. Shipitalo tested the effectiveness of this bonding process under different conditions. He found that when the casts (excreted matter) of worms are left on top of the ground unprotected from rain, they can be dispersed and can contribute to the crust that seals off the soil surface.

If the casts are protected by a crop residue, however, they remain undispersed until they

dry or age enough to produce a granular structure believed to be good for the soil. Shipitalo's findings support the belief that no-till farming may be the answer to declining corn yields if beneficial soil animals are allowed to thrive.

Earthworms were first brought to Canada by European settlers who intended to improve Canadian soil for agriculture. The worms spread across the country in fishermen's bait pails and on soil-covered roots of transplanted vegetation. There are now 19 species of earthworms in Ontario, though not all are beneficial to soil structure. The Guelph scientist says more investigations are needed to determine the importance of each species and the rate at which soils can be rejuvenated.

Shipitalo's research was funded by a Natural Sciences and Engineering Research Council strategic grant and the Ontario Ministry of Agriculture and Food. ○

For Sale: Concert maestro's violin with bow and case, Ext. 3103 or 893-8307, after 5 p.m. Olivetti electric typewriter with cover and operator's manual, recently serviced; two P205/70 R14 snow tires on new rims; Mastercraft automatic three-speed portable humidifier, 822-5141, after 5 p.m. Tandy 1000 computer, two drives, 640K, Ext. 3027. 1973 Westphalia camper van, Mike, 763-3341. Noma electric snow shovel, 821-1304, after 7 p.m. Woman's large black soft leather jacket; woman's large denim winter-lined jacket, 821-4356. Sears electric typewriter with corrector tape; electric car heater, 836-5353, after 6 p.m.

Wanted: Military modelist seeks information about British Light Cavalry uniforms of the Crimean War, Dave, 837-1732. Small house or bungalow in country close to Guelph, to rent or lease from May 1, Ext. 4640.

For Rent: Two-bedroom furnished apartment to sublet May 1 to September, 763-4020, after 6 p.m. Three-bedroom furnished house plus cat, July 1 to Jan. 31, 821-2133. Two bedrooms in three-bedroom apartment, available now, Maria, Ext. 8527 or 823-1560.

Lost: Black and silver fashion necklace with unusual design of large silver flower on centre, Jan. 12 at 8:30 a.m. between parking lot P19 and Trent Lane, Sandy, Ext. 3132 or 823-2239.

Available: High-quality typing close to University, short notice, Kathy, 822-5984.

"Personals" is a free service offered by at Guelph for staff, faculty and students at the University. All items must be typed, double spaced, and submitted to at Guelph one week before publication.

Briefly

SOUTHEAST ASIAN LANGUAGE BURSARIES are available to full-time students enrolled at Ontario universities from the University of Toronto-York University Joint Centre on Modern East Asia. A language study program must be for university credit and transferable to the student's home university. Deadline for applications is April 17. The centre also offers doctoral research fellowships, with priority going to doctoral candidates enrolled at the University of Toronto and York University. Applications are invited from doctoral candidates who have completed their course requirements and are beginning or have begun work on a dissertation. Information and applications are available from: Joint Centre on Modern East Asia, 631 Spadina Ave., Toronto, Ont. M5S 2H6, 416-978-6820.

WHAT THE BUTLER SAW is the Drama Department's first production of 1987, directed by artist-in-residence James Roy and designed by guest designer Douglas Lemcke. Joe Orton's "What the Butler Saw" outraged audiences when it was first produced in Britain in 1969, even though Lord Chamberlain had ordered parts of it censored. Masquerading as a British sex farce, the play attacks doctors, the government, the church and the police. It runs from Feb. 23 to 28 at 8 p.m. at the Inner Stage, MacKinnon building. Tickets are \$3.50 for Monday, Tuesday and Wednesday performances and \$4.50 for Thursday, Friday and Saturday, and are available at the University Centre box office and the Bookshelf Cafe.

RELAXATION TRAINING is the focus of a Counselling and Student Resource Centre four-week program beginning Feb. 23. Participants will learn a variety of methods for physical and mental relaxation. For more information and to register, ask at the Connection Desk, Level 3, University Centre.

THE GUELPH-WATERLOO PROGRAM for Graduate Work in Physics features Tony Arrott of Simon Fraser University as the next speaker in its Distinguished Lecturer Series. Arrott is the 1986 recipient of the Canadian Association of Physicists Medal for Achievement in Physics, awarded in recognition of his experimental research on magnetism. His talk, entitled "New Phases of Transition Metals Epitaxially Grown in Ultra-Thin Layers" is Feb. 27 at 3 p.m. in Physics 145, University of Waterloo.

GUELPH FIELD NATURALISTS plan a morning of cross-country skiing led by Erica Morant Feb. 14 at 9 a.m. Skiers should meet at the OVC parking lot, corner of Gordon Street and College Avenue. For more information, call 822-9201.

CAROUSEL is a literary arts magazine put out by the University of Guelph arts community. The third issue will be on sale in the University Centre courtyard Feb. 12 and in the lobby of the MacKinnon building

As of at Guelph deadline Feb. 6, 1987, the following opportunities were available to on-campus employees only:

Custodian 4, Housekeeping Department. Job rate: \$10.70 per hour; probation rate: \$.20 per hour lower than job rate.

Data Report Clerk (Clerk II), Department of Alumni Affairs and Development. Salary range: \$291.19 minimum; \$336.53 job rate (level 5); \$419.16 maximum.

Custodian 3, Housekeeping Department. Job rate: \$10.25 per hour; probation rate: \$.20 per hour lower than job rate.

It is the University's policy to give prior consideration to on-campus applicants. To determine the availability of University employment opportunities, contact employment services and training, Level 5, University Centre, or telephone 836-4900.

Feb. 19. Copies are also available at the Campus Bookstore, Co-op Bookshop, Bookseller and Bookshelf Cafe. The deadline for submissions of poetry, prose and artwork for the fourth issue is May 31. Submission information is available in Room 243, University Centre.

A SWEETHEART SPECIAL will be offered by the Whippetree Dining Room Feb. 14 from 5:30 to 9:30 p.m., featuring a choice of three appetizers, entrees and desserts. Reservations are recommended; call Ext. 3500.

STEVEN ISSERLIS, cello, performs at the Department of Music's free Thursday noon-hour concert Feb. 19. Isserlis has appeared as soloist with many orchestras in Britain as well as in Israel, Scandinavia and the United States. He is the musical director of the Deal Festival in Kent, where he teaches master classes. Program 1 at 12:10 p.m. in Room 107, MacKinnon building, will consist of "Suite No. 5 for Unaccompanied Cello" by Bach and "Suite No. 1 for Solo Cello" by Block. Program 2 at 1:10 p.m. will feature "Tocata for Solo Cello" by Saxton and "Suite No. 3 for Unaccompanied Cello" by Bach.

THE COLLOQUIUM FOR THE CRITICAL APPROACH to Science and Philosophy meets Feb. 22 at 1:30 p.m. in Room 441, University Centre. At 2 p.m., Prof. Carlton Gyles, Veterinary Microbiology and Immunology, will discuss "Distinguishing Parents from Offspring: The Problem of Labelling Pathogenic Bacteria." At 4 p.m., Stephen Turner, department of sociology, University of South Florida, discusses "What Do Statistics Tell Us About Cause That We Don't Already Know?" Anyone interested in being on the colloquium mailing list or in making a presentation should contact Prof. Fred Eidlin, Political Studies, Ext. 3469, or Prof. Tom Settle, Philosophy, Ext. 3123.

FACULTY FROM VARIOUS COLLEGES on campus who are concerned with food research will be featured in parts of a mini-series on food on Toronto's CITY-TV, Cable 7. The four-minute segments in the series will run Feb. 16 to 20 between 6 and 7 p.m. as part of City-Pulse.

THE LIBERAL EDUCATION SERIES "Agriculture and Ecology: The New Solitudes?" continues Feb. 23 with "Conflict in the Use of Ecosystems." Sponsored by the Senate Advisory Committee on Liberal Education, the discussion begins at 12:10 p.m. in Room 442, University Centre. Everyone is welcome.

The following abbreviations are used in at Guelph: AC=Athletics Centre; ANNU=Animal Science Nutrition; APS=Animal and Poultry Science; BG&Z=Botany-Genetics-Zoology; CM=Chemistry-Microbiology; CS=Crop Science; CSRC=Counselling and Student Resource Centre; Eng=Albert A. Thornbrough building; FS=Food Science; HAFA=Macdonald Stewart Hall (Hotel & Food Administration); HB=Human Biology; Hort=Horticultural Science; ICS=Institute of Computer Science; JH=Johnston Hall; LA=Landscape Architecture; L/A=Lennox/Addington; Lib=McLaughlin Library; LRS=Land Resource Science; Mac=Macdonald Hall; MacK=MacKinnon building; MacN=MacNaughton building; PCH=Peter Clark Hall; UC=University Centre; WMH=War Memorial Hall.

Next Week at Guelph

THURSDAY, Feb. 12, 1987

Raithby Memorial Lecture - OPTIMUM UTILIZATION OF NUTRIENTS, FEED INGREDIENTS AND ADDITIVES FOR HIGH PRODUCING COWS, Marshall McCullough, 10 a.m., Arboretum Centre.

Society for International Development - GENDER ISSUES IN DEVELOPMENT PLANNING: WITH SPECIAL REFERENCE TO INDONESIA, Mary Coyle, noon, MacK 132.

Worship - ECUMENICAL CAMPUS MINISTRY, Meet and Eat, noon to 2 p.m., PCH; COMMUNITY EVENING, 5 to 6:30 p.m., OTAS Lounge, UC Level 5; EXPLORATIONS IN MEDITATIVE PRAYER, 5:10 p.m., Chapel, UC Level 5.

Concert - THE REMBRANDT TRIO, violin, cello and piano, 12:10 and 1:10 p.m., MacK 107.

OVC's 125th Anniversary Celebration Lecture - VACCINATION AGAINST RETROVIRUSES: FROM FAIDS TO AIDS, William F.H. Jarrett, 3 p.m., WMH.

Apiculture Club - INTERNATIONALLY YOURS, U OF G APICULTURE DEPARTMENT, Gord Townsend, 5:10 p.m., Graham Hall 200.

Continuing Education - "THE NAME OF THE ROSE": MEDIEVAL MORALITY, 7 p.m., register Ext. 3956/3957.

Guelph Field Naturalists - NATURE THROUGH THE SEASONS, Karl Glockman, 7:45 p.m., Arboretum.

Dance - VALENTINE'S PARTY, 8 p.m., PCH, sponsored by the UC.

FRIDAY, Feb. 13, 1987

Schedule of Dates - LAST DAY for submission of student petitions, second meeting.

Worship - CATHOLIC MASS, 8:10 a.m., Chapel, UC Level 5.

Horticulture Club - VALENTINE'S DAY CUT FLOWER SALE, 9 a.m. to 5 p.m., UC courtyard.

Gerontology Research Centre Seminar - SENSORY PROPERTIES OF FOOD AS THEY RELATE TO FOOD HABITS, NEEDS AND PERCEPTIONS OF ELDERLY CONSUMERS, Karen Madeira, 12:10 p.m., UC 430.

Current Issues in Agriculture - FREE TRADE, AN AGRICULTURAL PERSPECTIVE, Thorald Warley, 3 p.m., CS 121.

SATURDAY, Feb. 14, 1987

Guelph Field Naturalists - CROSS-COUNTRY SKIING, 9 a.m., OVC parking lot, Gordon and College.

Dinner-Dance - ST. VALENTINE'S PARTY, 6 p.m., Creelman Hall, \$55 per couple.

Arboretum - NIGHT STALKER'S OWL PROWL, 7 p.m., register Ext. 3932.

SUNDAY, Feb. 15, 1987

Worship - ROMAN CATHOLIC MASS, 10:10 a.m., PCH; ECUMENICAL CAMPUS MINISTRY (Anglican, Presbyterian, United), 10:30 a.m., Chapel, UC Level 5.

Sunday Afternoon Walk - INSECTS IN WINTER, 2 p.m., Nature Centre.

MONDAY, Feb. 16, 1987

Schedule of Dates - MID-SEMESTER BREAK, no classes scheduled.

Engineering Graduate Seminar - A FINITE ELEMENT METHOD FOR TILE DRAINAGE SIMULATION, Everson Peters, 3:10 p.m., Eng 106.

Worship - INQUIRY INTO CATHOLICISM, 4:10 p.m., UC 332; ROMAN CATHOLIC MASS, 5:10 p.m., Chapel, UC Level 5.

TUESDAY, Feb. 17, 1987

Schedule of Dates - MID-SEMESTER BREAK, no classes scheduled.

Cuso - INFORMATION TABLE, 10 a.m. to 2:30 p.m., UC courtyard; INFORMATION MEETING, 7:30 p.m., UC 441.

Worship - ECUMENICAL CAMPUS MINISTRY, Know Your Bible,

noon, UC 444; ROMAN CATHOLIC MASS, 12:10 p.m., Chapel, UC Level 5; SCRIPTURE ALIVE!, 4:10 p.m., UC 334.

Our World - NICARAGUA: POLITICAL UPDATE, 12:10 p.m., UC 332.

Senate - MEETING, 8 p.m., MacN 113.

WEDNESDAY, Feb. 18, 1987

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301; DECISION MAKING, noon, register at Connection Desk, UC Level 3, by 11 a.m.; WRITING ASSISTANCE, 5:30 to 9 p.m., Lib 359; INTEREST TESTING, 7 p.m., register at Connection Desk by 4 p.m.

Concert - THE ROMANTIC BROTHERS, noon, UC courtyard.

Worship - ECUMENICAL CAMPUS MINISTRY, Holy Communion, 12:10 p.m., Chapel, UC Level 5; THEOLOGY FROM EXPERIENCE, 7:30 p.m., UC 332.

Entrepreneurship and Your Business - PREPARING A SUCCESSFUL BUSINESS PLAN, Donald McQ Shaver, 3:10 p.m., APS 141.

OVC Evening Business Management Program - INVENTORY CONTROL AND PURCHASING, TAX PLANNING, Bruce Karcher, 7 p.m., OVC 508.

Interdepartmental Seminar in Systematics - SYSTEMATICS OF CILIATED PROTISTS: FROM OPTICAL MICROSCOPY TO MOLECULAR TECHNOLOGY, Denis Lynn, ANNU 141.

Theology from Experience - JUDAISM AND CHRISTIANITY: MAJOR THEOLOGICAL DIFFERENCES, Rabbi Bernard Baskin, 7:30 p.m., UC 332.

THURSDAY, Feb. 19, 1987

Pathology Graduate Seminar - A CASE REPORT OF CANINE FAMILIAL RENAL DYSPLASIA, M. Brash, 11:10 a.m., Path 220.

Society for International Development - INNOVATION IN LIBRARY SERVICE: THE CASE OF GUELPH-BEIJING AGRICULTURAL UNIVERSITY PROJECT, John Black, noon, MacK 132.

Worship - ECUMENICAL CAMPUS MINISTRY, Meet and Eat, noon to 2 p.m., PCH; COMMUNITY EVENING, 5 to 6:30 p.m., OTAS Lounge, UC Level 5; EXPLORATIONS IN MEDITATIVE PRAYER, 5:10 p.m., Chapel, UC Level 5.

Concert - STEVEN ISSERLIS, cello, 12:10 and 1:10 p.m., MacK 107.

Apiculture Club - COLLEGE ROYAL MEETING, 5:10 p.m., Graham Hall 200.

Dance - DOUG AND THE SLUGS, 9 p.m., PCH, sponsored by the UC.



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Dr. David Holmberg designs "skin button" for artificial heart surgery. See story, page 2.

Employment equity program launched

A long-standing commitment to equal opportunity in employment at the University was reaffirmed by President Burt Matthews in a "Memo from the President" to all faculty and staff Feb. 9.

Matthews also said the University is embarking on a program of employment equity under the Federal Contract Compliance Program — an action prompted by Ottawa's recent announcement that anyone doing business with the federal government in contracts of more than \$200,000 must participate in the program.

Matthews said the program for regular, full-time employees, already under way at several Ontario universities, will eliminate discriminatory barriers to employment — especially for women, native Canadians, the disabled and visible minorities — and will ensure that employees and the University realize their fullest potential.

Program objectives

The program has three objectives:

- to ensure that demonstrated ability is regarded as the prime criterion for the treatment of individual employees and the hiring of new employees;
- to ensure that all employees are encouraged to develop abilities without being subjected to discrimination, however unintentional, and;
- to move towards a more heterogeneous distribution and balance in gender and minority groups in employee complement across ranks or job levels and employment categories.

"This is not an affirmative action program," says Roy Pella, director of Personnel. The experience with affirmative action, especially in Quebec and the United States, has found that when quotas were established for minority-group representation in the work force, many minority-group members were placed in positions they were not qualified for to meet those quotas, he says.

"Employment equity is different. It emphasizes demonstrated ability, or qualification for a position, and at the same time encourages the employer to take active steps to ensure that qualified minority-group members are competing for, or are being helped to compete for, employment opportunities."

It is the offer to help minority-group members

compete for jobs that is "perhaps the most controversial aspect of the employment equity program," says Pella. "By taking on a commitment to employment equity, we are saying that we accept the view that certain groups may be disadvantaged in their employment endeavors."

Pella stresses that the Federal Contract Compliance Program "will not compromise

our current policy of selecting the best candidate for an opening. By taking steps to ensure that minority-group members are able to compete on an equal footing for employment opportunities, the University is simply trying to take a more active role in providing minority-group members with equal employment opportunities."

Continued on page 2.

Internationally yours

University opening its doors to public in March

The University of Guelph's 63rd annual College Royal Open House Weekend is March 14 and 15. The theme of the student-organized event is "Internationally Yours," reflecting how much of this University's teaching and research touches — and is touched — by the rest of the world.

Among the events scheduled:

- An international dance festival will feature Ukrainian, African, Middle Eastern, Indian, West Indian, Chinese and Canadian dance styles, and fashion shows will present contemporary and traditional ethnic clothing;
- Spanish, French, Italian and German displays of the Department of Languages and Literatures will immerse visitors in the ambience of other cultures — and many offer taste treats as well. The Economics Club will focus on the possibility of a free trade agreement, and the Geography Club will display domestic and international research projects;
- The Wildlife Club exhibit will focus on the illegal trade of endangered species across international borders. "Operation Falcon" is a slide show and commentary on the recent investigation into illegal trade of Peregrine falcons to Saudi Arabia;
- This year also marks the 125th anniversary of OVC, so visitors will be treated to special OVC displays with an international flavor. There will be an audio-visual tour of veterinary practice from Europe to India, Africa to Australia; a display on concerns about toxins; and a slide show illustrating ailments of zoo and wild animals from



around the world. There will also be an opportunity to meet a few exotic patients, and to take a tour of the Wild Bird Clinic, the only one of its kind in Canada;

- The University's agricultural roots will be evident in many events, including the livestock show, the old-time square dance competition and the seeds and forage show;
- Other perennial favorites will include the Arboretum's maple syrup exhibition, the chemistry "magic show," the petting zoo and the dog and cat shows.

Open House weekend is 9 a.m. to 5 p.m. March 14 and 11 a.m. to 5 p.m. March 15. Parking is free, as is the shuttle bus service that will circle the campus, beginning at 11 a.m. each day. Information and campus maps will be available in the University Centre and at other campus locations throughout the weekend. ○

OVC researcher designs skin button to reduce surgery infections

by Sandra Couch

A Clinical Studies researcher who helped train cardiac teams in artificial heart implant procedures in Utah has designed a modification for the artificial heart that dramatically reduces post-operative site infections.

Prof. David Holmberg's percutaneous access device cuts infections in implant cases from 57 per cent to 20 per cent. Developed in the United States, the device is now awaiting approval from the Food and Drug Administration.

Holmberg's design of what is commonly called a "skin button" was accompanied by a modification in the surgical technique used during artificial heart surgery. Previously, the pneumatic drive lines left the patient's body at an acute angle from a straight incision; the gross infection rate where the skin met the device was 57 per cent. Holmberg's design and his suggestion that the incision be made in an arc shape led to the reduced infection rate. The arc-shaped incision created a small flap of skin that covered the incision drive line exit site, reducing the buildup of debris that often caused infections.

"If I made a contribution to the development of artificial heart implantation techniques, it was in the design modification and the implantation of the skin button," says Holmberg, who came to Guelph last July from the University of Saskatchewan. His involvement in the artificial heart transplant program began in Salt Lake City when the veterinarian-director of the Institute for Biomedical Engineering, Dr. Donald Olsen, invited him to become part of the training program. Calves and sheep were used to train teams of cardiac surgeons in the techniques of artificial heart implantation, and surgeons had to successfully complete the program transplants before they could be licensed to operate on human patients.

Holmberg worked with Dr. William DeVries, who became a media celebrity for his work on artificial heart recipients Barney Clark and William Schroeder, and with famed Texas cardiac surgeon Dr. Denton Cooley. "Utah was the only facility where teams could come for training," says Holmberg. "We trained people from all over the world. I was part of the team that trained the Swedish surgeons who returned home to do a transplant two weeks later."

Holmberg has personally been involved in

about 100 artificial transplant procedures. He was the primary surgeon in 10 of those, assisted in 40 more and did the anesthesiology and bypass work for the rest.

Monitoring the "animal/implant interface" is a fascinating new area of study, he says. "If we're looking at some day developing a permanent artificial heart, we're going to have to determine what the body's response is to this artificial blood pump. Nobody has looked at this. Right now, the artificial heart is just a bridge to transplant or an assist device used while a sick heart recovers." Although Holmberg's involvement in artificial heart transplants predates his arrival at Guelph, he is eager to bring the OVC connection to bear in his future research.

"This OVC collaboration in human heart transplant teams will enhance our ability to treat congenital and acquired heart defects in our veterinary patients," he says. "There are very few places in the world that a veterinarian can walk into open heart surgery and act as an integral member of that team. This is my opportunity." ○

Equity Continued from page 1.

The program has 11 steps to action: Step 1 — already taken — is to communicate to employees, unions and associations that the University is committed to the program through the president's letter and an article in *at Guelph*, to be followed by the development of policies in personnel manuals and the University of Guelph Faculty Association's Special Plan Agreement, and meetings with bargaining units and employee associations.

Step 2 has also been taken — to assign program responsibility to the Department of Personnel. Pella says an employment equity co-ordinator is needed to gather and analyse information and to implement the program. The contract position would be in Employment Services, reporting to manager Cal Swegles.

Step 3 is to collect and monitor information on the employment status of designated group employees by occupation and salary levels and in terms of hiring, promotion and termination in relation to all other employees. Personnel will be working with federal auditors to make sure the right data collection tools are used and that Personnel's analyses meet program requirements, says Pella. Personnel will develop employee surveys, an employment application tear-sheet, recording procedures for faculty advertising and competitions, computerized competition records for vacancies and a computerized human resource inventory. Personnel will also, on an ongoing basis, collect and maintain data on recruitment and advertising, hiring and promotion, training and staff development, layoffs, retirements and terminations.

"We already have quantitative data on our female faculty, professional staff and support staff but we don't have qualitative or systemic data on any of these groups," says Pella. "And we have no data at all on the visible minorities and the disabled," because the Ontario Human Rights Code prohibits employers from inquiring on application forms about race, ethnicity and physical and mental handicaps.

Through the employment equity program, Personnel will have to gather such information to learn how these groups of employees are represented on campus, how many applied for jobs and how many actually got them, how many have quit and why they have left, how many are being promoted and what training opportunities are available to them.

Some of this information will be known when the President's Advisory Committee on Equal Rights for Women and Men at the University of Guelph, chaired by Prof. Susan McIver, chair of the Department of Environmental Biology, submits its report to Matthews this spring. Richard Whiting, Personnel, is a resource person to McIver's committee.

Step 4 is an analysis to see how the University's employment of these groups relates to the actual supply of qualified workers in the community. Pella says the Department of Employment and Immigration will be supplying Personnel with some numbers to work with at this stage.

Step 5 is to eliminate or modify policies, practices and procedures that are unfavorable to the employment status of these groups, and Step 6 is to set goals towards the proportional representation of these groups in the work force through hiring, training and promotion.

Step 7 is for departments to establish work plans that will be monitored and evaluated in

conjunction with the co-ordinator. Step 8 is to consider special measures to help these groups — special training, day care, career counselling services and flexible work arrangements. Facilities for the disabled will also have to be reviewed.

Step 9 is to create a favorable climate to integrate these employees. This would be done through in-house communication and campus-wide sessions that would inform and cultivate supportive attitudes. Step 10 is to plan the monitoring of the program and to prepare annual reports to the president and federal authorities. Step 11 is to grant authority to the Canada Employment and Immigration Commission to access records and conduct on-site reviews to measure the program's progress.

"Clearly, the University's success in complying with these 11 steps will require the support and co-operation of all University departments, unions and associations," says Pella.

Just how the program will reshape the University's work force is not yet known, but Matthews says it is intended to increase the representation of qualified minority-group members, especially in the so-called non-traditional areas of employment at the University.

Funding for the program will come from the provincial government and the University. In a letter dated Jan. 7, Gregory Sorbara, minister of colleges and universities, invited the University to submit a proposal for program funding for the next three years from the Employment Equity Incentive Fund for universities and related institutions. After that time, MCU says it expects the program to be fully financed by the institutions from their own resources. ○

Letters to the Editor

Clearer budget information

I am puzzled by the apparently contradictory information we are receiving on financial matters at the University. On the one hand, we are informed of a three-percent increase in funding (see *at Guelph* Nov. 13, 1986), while on the other, we are being asked yet again to trim our own budgets by three to 3.5 per cent. I find it impossible to reconcile these two bits of information. What should we believe, and who can give us the complete story? I raise this question because the answer will have a profound influence on what we can realistically accomplish for instructional development, among many other things, on this campus.

As a university, we have been through some involved and lengthy discussions that have led to the articulation and acceptance of *Toward 2000* and *The Learning Objectives*. These documents speak of "excellence" and give us some lofty ideals for the education of our students. If, however, we do not have the wherewithal to even approach these objectives, why have we even gone through these discussions? Increasingly, I wonder if they have been fine, but empty, academic exercises.

Already I am aware of the despondency that has afflicted faculty colleagues. As the cuts have continued, we have seen an increase in class sizes; we have seen the eradication of student "drop-in" centres, and the loss of more of them seems imminent; we have seen the inability to hire first-rate laboratory instructors, and so on it goes. These are forms of support that seem to me to be an integral part of providing a quality education. Yet we are prepared to pare them away while at the same time instituting studies on student attrition.

I know that for many of my colleagues "on the firing lines," morale is low. We wonder where we are headed and what we can do to maintain our commitment to teaching. Can I suggest that clearer communication on the University's financial situation and the rationale for the latest budget cuts might at least help us to understand our plight?

*Prof. Sandy Middleton,
Co-ordinator for Instructional
Development,
OEP/Zoology.*

Dedicated service

Further to the article "University organist" in *at Guelph* Feb. 5, I make the following comments:

- Prof. Ralph Kidd, Division of Music, served and played regularly as organist from 1950 to 1975 — even during the times when convocations were held in the Athletics Centre;
- Prof. Peter Hardwick, Department of

Music, served and played regularly as organist from 1975 to 1986;

- Profs. Kidd and Hardwick played important roles in the administrative aspects of the convocations; the latter being a member of the convocation committee for many years. Both enjoyed the co-operation and full support of the Registrar's Office.

Both of these men gave dedicated service to the University that should not be summarily dismissed as "whoever was available would play."

*Prof. Stanley Saunders,
Department of Music.*

Appointments

James Squires, department of health and human services, National Institute of Environmental Health Sciences, North Carolina, will join the Department of Animal and Poultry Science as assistant professor Aug. 1. He will fill an already established position. ○

Job opportunities

As of *at Guelph* deadline Feb. 13, 1987, the following opportunities were available:

Executive Secretary, Alumni Affairs and Development. Salary range: \$319.62 minimum; \$368.87 job rate (level 5); \$458.03 maximum.

Secretary, Canadian Public Policy/Canadian Review of Sociology and Anthropology Journals; grant position. Hiring range: \$17,000 to \$18,000 per year.

Research Assistant, Soil and Water Conservation, Department of Land Resource Science; grant position. Hiring range: \$397.77-\$431.78.

Assistant University Secretary, University Secretariat. Salary commensurate with qualifications and experience.

Computer Co-ordinator, Economics Department; temporary position, four days a week for about one year. Salary range: \$448.76 minimum; \$519.80 job rate (level 5); \$645.49 maximum.

It is the University's policy to give prior consideration to on-campus applicants. To determine the availability of University employment opportunities, contact employment services and training, Level 5, University Centre, or telephone 836-4900.



The cast for the Department of Drama's production of "What the Butler Saw" is shown here in a scene with David Sinclair as "Nicholas Beckett" (on table) and, in the background, left, Lynn O'Grady as "Mrs. Prentice" and Gerald Vanderwoude as "Dr. Prentice." Right is David Akin as "Dr. Rance" and Gina Giammarco as "Geraldine Barclay." The play runs from Feb. 23 to 28 at 8 p.m. at the Inner Stage, MacKinnon building. Tickets are \$3.50 for Monday, Tuesday and Wednesday performances and \$4.50 for Thursday, Friday and Saturday, and are available at the University Centre box office and the Bookshelf Cafe.

(Photo by Herb Rauscher, Illustration Services)

CBS students receive entrance scholarships

Entrance scholarships with a total value in excess of \$65,000 were recently awarded to 46 students in the College of Biological Science. The scholarships recognize the academic achievements of undergraduates in the B.Sc. and B.Sc.(Human Kinetics) programs who are beginning their university studies.

Entrance scholarships with a value of \$2,000 each were awarded to 25 students whose Year 5 high school averages were 80 per cent or higher. Students from Lanark and Wellington counties whose Year 5 average was at least 75 per cent received \$600 scholarships, and early in-course scholarships of \$650 were presented to 12 students whose university studies had already begun. In addition, three students were awarded \$600 entrance scholarships in the Human Kinetics program.

Mary Van De Valk of Strathroy received the Guelph Alma Mater Science Scholarship of \$600 in addition to receiving an entrance scholarship of \$2,000. Also receiving \$2,000 awards were Suzanne Merrill of Lynden, James McLister of Woodslee, Sara Ayres of Willowdale, Krista Russell of Agincourt, Tricia Griffin of Toronto, Kirsii Allo of Niagara-on-the-Lake, Rhonda Bain of Mississauga, Edward Coulter of Owen Sound, Carol Smith and Brenda Fleming of Markham, Tonya Khan and Stacey Warren of Niagara Falls, Lana McLaren of Onaping, Karla Josephson of Exeter, Tanya Petrenko of Milton, Virginia Cornell of Barrie,

Lori Moggy of Levack, Richard Keir of North York, Robert Burbidge of Coldwater, Ian Davis of Lindsay, Jeffrey Latimer of Spencerville, Grant Scherer of Ancaster, Janne Tamblin of Orono and Linda Liao of Brampton.

Winners of the McArthur-Humphries Scholarships, valued at \$600 each, were Dita Rasper, Mark MacDonald, Amitav Dash, Archana Dwivedi and David McLean, Jamie Hobson and Lesley Shepherd, all of Guelph, Laura Falt of Almonte and Lance Fielding of Carp.

Receiving Early In-Course Scholarships for Semester 1 students, valued at \$650, were Derick Hunt of Guelph and David Stirling of Sunderland. Second semester students receiving the early scholarships were Douglas Choong of Guelph, Neal Riekenbrauck of Brampton, Joanne Rogers of Etobicoke, Carla Wilkie of Puslinch, Jennifer Strickland of Burlington, Sally Adams of North York, Kellie Sanderson of Mississauga, John Rosati of London and Deborah Shaw of Agincourt. Samantha Munn of Toronto also received an early in-course scholarship based on her work in spring 1986.

Monika Wolnik of Markham was the recipient of the Alma Mater Entrance Scholarship in Human Kinetics, and she also won a \$600 entrance scholarship in the B.Sc.(H.K.) program. A Human Kinetics entrance scholarship also went to Karen Jordan of Ancaster. Ann Cooper of Perth received a \$600 McArthur-Humphries Scholarship. ○

Gathering information — the modern way

The world is in the midst of an information explosion, fueled by a growing number of electronic technologies that make information gathering easier and more efficient — if you know how to use them.

Continuing Education and librarian Virginia Gilham have developed a one-day short course to introduce "bookshelf" researchers to a new generation of microprint and computers. "Where to Go for What You Want to Know" will benefit people who want to upgrade dormant skills as well as those whose research needs are ongoing, says Gilham.

"In the 1980s, an overwhelming amount of information is available to the researcher, not only in printed books and journals, but also on microform, in various audio-visual formats, and increasingly, by computer," she says. "The key to successful information gathering is to know where and how to look for the facts."

The course is Feb. 21, beginning at 9:30 a.m. To register, contact Continuing Education, Room 160, Johnston Hall, Ext. 3957. ○

Course explores world of art

The emphasis is on enjoyment in the popular Continuing Education course "Art for Amateurs and Connoisseurs." Prof. Chandler Kirwin, Fine Art, and Judith Nasby, director of the Macdonald Stewart Art Centre, will moderate this exploration of fine and decorative arts.

The six Wednesday evening sessions, beginning March 4, will help participants develop an appreciation of art collections and learn to distinguish "real" art objects, and will provide an opportunity to meet experts in the field.

Among the guest speakers will be Ian Thom, curator of the McMichael Canadian Collection at Kleinburg, and Martha Langford, chief curator of the Canadian Museum of Contemporary Photography.

Participants will also have the opportunity to join the Macdonald Stewart Art Centre's annual art tour. This year's destination is New York City, and the tour April 10 to 12 will include the Metropolitan Museum, the Museum of Modern Art, the Guggenheim, the Frick, the Whitney Museum of American Art, Lincoln Centre and other famous landmarks.

For more information on the course, contact Continuing Education, Room 160, Johnston Hall, Ext. 3957. For details on the New York art tour, contact the Macdonald Stewart Art Centre, 837-0010. ○

Appreciating jazz

Blues, ragtime, Dixieland, bebop and blues! All are part of the history of jazz music and each represents a new generation of North American musicians. Beginning March 2, jazz musician John Zadro will give an evening course on "Jazz Appreciation" on campus.

No previous musical experience is necessary to benefit from this course, says Zadro, nor is it necessary to know anything about jazz. To register, contact Continuing Education, Room 160, Johnston Hall, Ext. 3957. ○



Prof. Jane Robb, right, graduate student co-ordinator, Department of Molecular Biology and Genetics, recently received the first Pharmacia Prize in molecular biology and genetics on behalf of Dr. John McDougall, who is doing post-doctoral work at the Max-Planck-Institut für Molekulare Genetik in Berlin. The award was made by Gail Thompson, centre, Pharmacia's representative. At left is Prof. Ross Nazar, McDougall's PhD supervisor and chairman of the department.

(Photo by Herb Rauscher, Illustration Services)

Although that new fur coat you got for Christmas will help ward off winter's chill, it will actually keep you warmer if you wear it inside out, says Prof. Keith Slater, Consumer Studies.

Virtually all clothing marketed in Canada is designed for style, with little scientific testing done to rate it for warmth, he says, so if you're wearing the fur on the outside, you're wearing it for status. Inside out, the fur would provide excellent insulation from cold air and the outer layer of tough leather would keep the wind out.

Despite all the claims made by manufacturers of snowsuits and ski wear, says Slater, the best outfit for sub-zero temperatures is really a system of layered clothing. The object is to keep cold air and wind out, while letting moisture vapor escape. For extensive outdoor activities, he recommends wearing underwear and a shirt made from a fabric that will absorb perspiration away from the body. If you perspire and allow your clothing to get wet, heat loss increases.

The second layer should be airy because air is the best possible insulation. "The fibre content of the garment doesn't make it a good insulator, the air it entraps does," he says, so you should wear a middle layer of clothing with

a loose weave containing a number of tiny holes to trap air. On the outside, wear a fabric that is tightly woven to prevent a blast of air from entering.

Slater advises shoppers to be careful when buying vinyl and rubber-coated fabrics that stop air and water completely. They will also prevent perspiration from evaporating. Such waterproof garments should be designed with adequate ventilation at neck and ankle openings to allow water vapor out. Before buying, check the garment for gaping seams or design traps that would allow rain water and melting snow to run in rather than out.

Color plays a minor role in heat retention, although many people still believe that darker colors absorb more heat, says Slater. An extra slice of toast in the morning will probably provide more heat energy than wearing a dark-colored ski suit.

Although there is no perfect cold weather garment, with a little bit of common sense and a keen shopper's eye, you can be both warm and well-dressed this winter, he says. Look for garments that offer the best of these features, or as a last resort, buy from a known manufacturer so you can return the garment if it proves unsatisfactory. ○

CFUW names new executive

The Canadian Federation of University Women, Guelph chapter, recently elected its 1986/87 executive. Joyce Robinson is president; Janet Harrison, past-president; Anne Godfrey, vice-president; Margaret Hull, recording secretary; Beth Tu, corresponding secretary; June Crewson, treasurer; Rosemary France, membership secretary; Betty-Anne Stammers, social convener; and Helen Brimmell, publicity.

The local chapter celebrated its 40th anniversary this month, marking the milestone by changing its name from the Guelph University Women's Club. The new designation is in line with sister chapters across the country and also clears up some local confusion with the College Women's Club, says Brimmell.

The chapter welcomes female graduates from all universities. ○



The Canadian Federation of University Women, Guelph chapter, 1986/87 executive: front row, Anne Godfrey, left, and Joyce Robinson. Back row, left to right, Margaret Hull, Betty-Anne Stammers and Helen Brimmell.
(Photo by Herb Rauscher, Illustration Services)

Personals

For Sale: New golden ash Simmons change table, Cathy, 837-2205, after 5 p.m. 1982 Dodge 024 hatchback; girl's size 5 1/2 figure skates; men's size 9 JC Higgins skates; Bauer C21 super 8 movie camera with zoom and tripod; Bauer regular 8 and super 8 movie projector with screen, 843-5778, evenings. Three-bedroom house near University, private sale, 837-0445. Pioneer AM-FM stereo receiver, 15 watts per side, 822-6803. Two 48-inch growing lights with table stand, 822-4968. Boy's suit, size 10; Beaver outfit, size 8, small hat size; boy's Bauer ice skates, size 3-4; downhill ski boots, size 2-3, 824-2311, after 6 p.m. Stencils for mimeograph machine, Ext. 3883 or 3884. Olympia electronic type-writer/word processor, letter-quality printer (daisy wheel); video display and disk drive, 824-5373. Smith-Corona portable electric typewriter, Ext. 3259 or 836-0153.

For Rent: Four-bedroom and six-bedroom houses, both available May 1, one-year lease, 823-1560, after 6 p.m. Secluded holiday cottage, Camargue, S. France, three double/twin rooms for rent, all facilities, P.M. Rogers (OAC '72): Mas D'Auphan, Le Sambuc, 13200 Arles, France, Tel. 90.98.90.41, Telex VIA 410804F. One-bedroom apartment to sublet April 1 to September with option to continue lease, Ext. 3775 or 824-0062, after 6:30 p.m.

Wanted: House in country near Guelph, only one bedroom needed, will "babysit" pets and plants, from mid-February to end of April or later, small rent, for responsible female faculty, Ext. 8562 or 856-9105, evenings. Three-bedroom house to rent, furnished, close to campus for a sabbatical visitor and family, two adults and a four-year-old, non-smokers, no pets, required from June 1987 to end of April or May 1988, Bruce Hobin, Saskatoon, 306-242-7257, after 6 p.m. CST. Slide projector, preferably Kodak, with remote control and autofocus, 822-1082. Storage space to rent for four to eight months, at least 10 x 17 feet, south or east Guelph, 824-6240, 9 to 11 p.m. Two used stoves and two used refrigerators, 843-4651, after 5 p.m.

Available: Typing, letter-quality word processing by retired professional medical secretary, reasonable rates, prompt service, on-campus pickup, 824-3178.

"Personals" is a free service offered by at Guelph for staff, faculty and students at the University. All items must be typed, double spaced, and submitted to at Guelph one week before publication.

Our people

Prof. Glen Anderson, Crop Science, has received the "Excellence in Weed Science" award, which is sponsored by ELANCO, Division Eli Lilly Canada Inc. The award recognizes his important contribution to weed science in the areas of research, teaching and extension. Anderson has been at the University since 1955. ○

THE GERONTOLOGY RESEARCH

Centre seminar March 4 will focus on "Elderly Widows and Widowers: Patterns of Social Support." Guest speaker is Lucille Dickinson, Department of Family Studies, who will discuss research on factors influencing the availability of social support to elderly widowed people living in the community. The seminar is at noon in Room 441, University Centre.

STUDENT VOLUNTEERS are needed by the J.C. Taylor Nature Centre for the maple syrup program March 9 to April 9. Activities include puppet shows, tapping trees, collecting sap, making syrup and supplying visitor information. Hours are flexible and can be arranged to suit students' schedules. For more information, call the Nature Centre, Ext. 3932.

THE GENEVA GRADUATE STUDY Program, July 13 to 29, as an opportunity for young postgraduates to deepen their understanding of the principles, purposes and activities of the United Nations and related agencies through observation and study at the UN office in Geneva. Applicants must be fluent in either French or English and have a good understanding of the other language. The program will not help with travel or living expenses. Application forms must be submitted by April 15. For more information, contact Susan James, Development Education Program, Centre for International Programs, Ext. 6914.

JOB HUNTING SERIES is an all-day workshop by the career services section of the Counselling and Student Resource Centre. It is Feb. 28 from 9 a.m. to 4 p.m. Interested students should register at the Connection Desk, Level 3, University Centre, by 4 p.m. Feb. 27.

A FOUR-PAGE NEWSLETTER on information technology is being prepared for insert in *Research Guelph*, the University publication that is distributed three times a year to more than 4,000 industry and government scientists, teachers, faculty and alumni. Some of the areas of information technology research being covered in this supplement are computer messaging and conferencing, computer-assisted instruction and computers in agriculture. Anyone with suggestions for this supplement should contact Tom Carey at Ext. 3310 or Margaret Beckman at Ext. 8777 in the next few days.

MEET AND EAT, the regular Thursday noon-hour session sponsored by the Ecumenical Campus Ministry in Peter Clark Hall, has a special guest and change of venue March 5. Rev. Ted Scott, former primate of the Anglican Church of Canada and Canada's member of the Commonwealth Commission to South Africa, will lunch with interested members of the University community from noon to 2 p.m. in Room 103, University Centre. Beverages will be provided.

A SEMINAR on "Central American Refugees" is Feb. 28 at 1 p.m. at the Guelph International Resource Centre, 21 King St. N. The video "Flight from Terror" will be shown, and presentations will be made by representatives from the Canadian Jesuit Refugee Program and the Mennonite Central Committee, as well as several refugees.

ASH WEDNESDAY SERVICES will be held March 4 at 12:10 p.m. Roman Catholic Mass will be in Room 103, University Centre, and Ecumenical Campus Ministry eucharist will be in the Chapel, Level 5, University Centre.

EUROPEAN EXCURSIONS is what the Hafa Restaurant is billing its special luncheon March 3, 11:45 a.m. to 1 p.m. Call Ext. 8116 for reservations.

ROLMDATA CONNECTIONS using splitter boxes are now available from Communications Services. A splitter box is a small hardware device that can be attached at the user end of the ROLM RS232 interface. It allows two or more users to share a single ROLM data connection, thus reducing the cost of data network access. The disadvantage of the box is that two users cannot use the data line facility at the same time. For costs and information on data connection, splitter boxes and cabling, call the CS HELP line — Ext. 4357.

TO ORDER COMPUTER PAPER, contact Irene Thorenton, Ext. 6565, or send an ITI to Room 215, ICS building.

STRESS is the subject of three workshops to be presented by the Guelph Community Health Centre Working Group Feb. 25, March 4 and 11 at 7 p.m. at The Loft, 1 Carden St. "Stress and How to Manage It," led by Prof. Evelyn Bird, Human Biology, and physiotherapist Hillary Sullivan, provides an introduction to relaxation and biofeedback Feb. 25. "The Mechanics of Stress and How Massage and Yoga Can Assist in Reducing Stress" with Ursula McNaughton, RN, RMT, and "Stress as a Gift" with psychotherapist Dr. Ross Laing, are the topics March 4. On March 11, Prof. James White, Psychology, discusses "Releasing the Emotional Blocks Underlying the Stress Response" and Antjie Hallim examines "Theory and Techniques to Relax Mind and Body, Including Visualization and Progressive Relaxation." There is no fee for participation, but donations to cover costs are appreciated.

ART FOR AMATEURS and Connoisseurs, a six-week evening lecture series, begins March 4 at 7:30 p.m. at the Macdonald Stewart Art Centre. The first session is "Museums and Art Galleries: The Inside Track," with Prof. Chandler Kirwin, Fine Art, and Judith Nasby, director of the art centre, discussing museum development in historical and contemporary terms. Course fee is \$75. For more information or to register, contact Louise McMillan, Continuing Education, Ext. 3814.

MR. DRESSUP, with friends Casey and Finnigan, appears March 1 at 1 and 3 p.m. in War Memorial Hall. Mr. Dressup's television program has appeared on CBC television for 20 years. Tickets for the performances are \$6 and are available at the University Centre box office, Sam the Record Man, The Corner, Stone Road Mall, the Bookshelf Cafe, Stories bookstore and the Acton Public Library.

THE GUELPH COMMITTEE Against Imperialist War Preparations invites other groups and individuals to join them in two events. At noon Feb. 28, the group will picket in front of MP Bill Winegard's office to oppose Cruise missile testing. On March 3, the committee will hold an afternoon and evening "Conference Against the Two Superpowers" in Room 441, University Centre.

THE GUELPH YM-YWCA, 400 Speedvale Ave. E., will hold a used book sale Feb. 28 from 1 to 4 p.m. For more information, call 824-5250.

TICKETS for the College Women's Club fashion show are on sale at the University Centre box office. The show is March 3 at 7:30 p.m. at the Arboretum.

ANONYMUS, a group of wandering minstrels, performs at the Department of Music's Thursday noon-hour concerts Feb. 26 at 12:10 and 1:10 p.m. in Room 107, MacKinnon building. Group members Sylvain Bergeron, Claude Bernatchez, Marie-Louise Donald, Claire Gignac and Pierre Langevin are masters of a variety of instruments and disciplines, including mime, theatre, vocal technique and dance. Anonymus transforms everyday reality, juggling light, gesture, image, word and the music of a multitude of ancient instruments. Both programs will include a selection of medieval songs and instrumental works depicting special moments in the yearly cycle of the four seasons.

Positions elsewhere

McMaster University is seeking a director of development and alumni affairs. Applications, including curriculum vitae, should be sent by Feb. 27 to: F.C. Hopkinson, Director of Personnel Services, McMaster University, 1280 Main St. W., Hamilton, Ont. L8S 4L8.

McGill University is seeking a director of computing and telecommunications. Applications, including curriculum vitae, should be sent to: Dr. Paul Davenport, Vice-Principal (Planning & Computer Services), McGill University, 845 Sherbrooke St. W., Montreal H3A 2T5.



Psychology students with high academic standing were honored at a recent awards presentation at the Faculty Club. Front row, left to right, are Karin Mertins of Sundridge and Katherine Keller of Blenheim. Back row, left to right, are Vesna Sturman of Toronto, Jeremy Fleming of Oakville, Allan Sinclair of Mississauga, Prof. Jim Mottin, Department of Psychology, and Gail Jardine and Richard Kennedy, both of Guelph. Absent were Kimberley Keresturi of Brantford and Philip Naylor of Guelph. The John E. Tong Award for the most outstanding graduate thesis for 1986 went to Helen Bienert of Saskatchewan (absent).

(Photo by Herb Rauscher, Illustration Services)

New course meets needs of single parents

Because nearly half of all marriages break down, the time is not far off when 50 per cent of all families will be headed by only one parent, says family therapist Melba Tanner.

Tanner, who will teach the new Continuing Education course "Single Parent Families" beginning March 2, says all single parents face similar problems. Immediately following marital breakdown, the parent must adjust to being the only adult in the home and the only role model for the children.

Regardless of gender, she says, a single parent can provide children with good role

models for both father and mother. She advises single parents to make a conscious effort to involve their children with friends, grandparents, aunts and uncles as part of their daily lives.

Talking over problems with other single parents can be a valuable exercise, says Tanner. In her course, she hopes to draw on the experiences of both male and female single parents, as well as relatives, social workers and teachers.

"Single Parent Families" will meet for six Mondays at 7:30 p.m. Cost is \$25, \$15 for seniors. For more information, contact Continuing Education, Room 160, Johnston Hall, Ext. 3957. ○

Next Week at Guelph

Continued from page 8.

Biochemistry Seminar - MODIFICATION OF THE PEPTIDE BACKBONE AND ITS EFFECTS ON THE BIOLOGICAL PROPERTIES OF PROTEIN, Gilles Lajoie, noon, MacN 222.

Worship - ECUMENICAL CAMPUS MINISTRY, Holy Communion, 12:10 p.m., Chapel, UC Level 5; THEOLOGY FROM EXPERIENCE, 7:30 p.m., UC 332.

Entrepreneurship and Your Business - STARTING A BUSINESS—RAISING THE MONEY, ETC., Donald McQ Shaver, 3:10 p.m., APS 141.

OVC Evening Business Management Program - PURCHASING A PRACTICE, Bruce Karcher, 7 p.m., OVC 508.

Theology from Experience - WOMEN'S EXPERIENCE OF SCRIPTURE, 7:30 p.m., UC 332.

THURSDAY, Feb. 26, 1987

Society for International Development - INTERNATIONAL

Diploma program in public policy & administration

A new distance education diploma program in public policy and administration is intended to provide an intellectual component to the workplace experiences of professionals, say its designers in the Department of Political Studies. Acting chairman Prof. Brian Woodrow says the program is an initiative "to try to make (the department's) courses more widely available to people already out in the work world."

The University is just beginning to market the diploma program, says co-designer Prof. Richard Phidd, but government workers and members of the Canadian Armed Forces have already shown an interest. "People already specializing in other areas will find these courses helpful once they are on the job," he says. "It's an alternative to a co-op program because people can study in an area where they are already working."

The *ad hoc* design of some distance education programs in the past has meant people took courses out of personal interest rather than for some structured purpose, says Prof. Ken Woodside, another of the program's architects. "We have created an entire program that people can use in their jobs, whether they are working in government or the private sector."

The diploma program consists of 10 courses—five required and five electives. The courses are at the undergraduate level, but students enrolled in the degree program cannot use the courses to obtain diplomas in addition to their degrees. Students will be able to enrol in the diploma program next semester, Woodrow says. ○

Policies manual distributed

A manual of University policies is being distributed this week to all faculty and full-time staff on campus. This is the first time all University policies have been assembled in one publication.

The purpose of the 56-page tabloid is to make policy information more readily accessible to members of the University community, says President Burt Matthews. ○

STUDENTS: A VANISHING BREED? Don Amichand, noon, MacK 132.

Worship - ECUMENICAL CAMPUS MINISTRY, Meet and Eat, noon to 2 p.m., PCH; COMMUNITY EVENING, 5 to 6:30 p.m., OTAS Lounge, UC Level 5; EXPLORATIONS IN MEDITATIVE PRAYER, 5:10 p.m., Chapel, UC Level 5.

Concert - ANONYMUS, 12:10 and 1:10 p.m., MacK 107.

Apiculture Club - BEESWAX CANDLE-MAKING DEMONSTRATION, Ivan Petrick, 5:10 p.m., Graham 200.

Film - CASABLANCA, 7 and 9:20 p.m., Mac 149.

The following abbreviations are used in *Guelph*: AC=Athletics Centre; ANNU=Animal Science Nutrition; APS=Animal and Poultry Science; BG&Z=Botany-Genetics-Zoology; CM=Chemistry-Microbiology; CS=Crop Science; CSRC=Counselling and Student Resource Centre; Eng=Albert A. Thornbrough building; FS=Food Science; HFA=Macdonald Stewart Hall (Hotel & Food Administration); HB=Human Biology; Hort=Horticultural Science; ICS=Institute of Computer Science; JH=Johnston Hall; LA=Landscape Architecture; L/A=Lennox/Addington; Lib=McLaughlin Library; LRS=Land Resource Science; Mac=Macdonald Hall; MacK=MacKinnon building; MacN=MacNaughton building; PCH=Peter Clark Hall; UC=University Centre; WMH=War Memorial Hall.

Next Week at Guelph

THURSDAY, Feb. 19, 1987

Pathology Graduate Seminar - A CASE REPORT OF CANINE FAMILIAL RENAL DYSPLASIA, M. Brash, 11:10 a.m., Pathology 220.

Society for International Development - INNOVATION IN LIBRARY SERVICE: THE CASE OF GUELPH-BEIJING AGRICULTURAL UNIVERSITY PROJECT, John Black, noon, MacK 132.

Psychology Colloquium - DEVELOPMENT AND USE OF META ANALYSIS FOR DATA AGGREGATION, John Hunter, noon, MacK 223.

Worship - ECUMENICAL CAMPUS MINISTRY, Meet and Eat, noon to 2 p.m., PCH; COMMUNITY EVENING, 5 to 6:30 p.m., OTAS Lounge, UC Level 5; EXPLORATIONS IN MEDITATIVE PRAYER, 5:10 p.m., Chapel, UC Level 5.

Cellular & Molecular Biology Journal Club - MEETING, Steve Kruth, noon, VMI 101.

Concert - STEVEN ISSERLIS, cello, 12:10 and 1:10 p.m., MacK 107.

Infection Control Awareness Day - INFECTION CONTROL IN VETERINARY TEACHING HOSPITALS, John Prescott, 12:10 p.m., CS 510.

Lecture - IMPACT OF JOB EXPERIENCE AND ABILITY ON JOB KNOWLEDGE, WORK SAMPLE PERFORMANCE AND SUPERVISING RATINGS OF JOB PERFORMANCE, John Hunter, 2:30 p.m., MacK 132.

Apiculture Club - COLLEGE ROYAL MEETING, 5:10 p.m., Graham Hall 200.

Dance - DOUG AND THE SLUGS, 9 p.m., PCH, sponsored by the UC.

FRIDAY, Feb. 20, 1987

Schedule of Dates - LAST DAY for application to graduate for spring convocation.

Worship - CATHOLIC MASS, 8:10 a.m., Chapel, UC Level 5.

Seminar - HISTOPATHOLOGY, Antony Hayes, 9 a.m., Path 220.

Biomedical Sciences Graduate Seminar - CHEEK POUCHES AND YOU: A QUEST FOR RETINOID CONTROL OF TISSUE MORPHOGENESIS, H. Covant, noon, OVC 3648 (old 309).

Film - FLETCH, 8 p.m., MacN 105.

SATURDAY, Feb. 21, 1987

Continuing Education - PERSONAL INCOME TAX PREPARATION, 9 a.m.; WHERE TO GO FOR WHAT YOU WANT TO KNOW, 9:30 a.m., register Ext. 3956 or 3957.

Arboretum - NIGHT STALKER'S OWL PROWL, 7 p.m., register Ext. 3932.

SUNDAY, Feb. 22, 1987

Worship - ROMAN CATHOLIC MASS, 10:10 a.m., PCH; ECUMENICAL CAMPUS MINISTRY (Anglican, Presbyterian, United), 10:30 a.m., Chapel, UC Level 5.

Colloquium for the Critical Approach to Science and Philosophy - DISTINGUISHING PARENTS FROM OFFSPRING: THE PROBLEM OF LABELLING PATHOGENIC BACTERIA, Carlton Gyles, 2 p.m.; WHAT DO STATISTICS TELL US ABOUT CAUSE THAT WE DON'T ALREADY KNOW, Stephen Turner, 4 p.m., UC 441.

Sunday Afternoon Walk - MAMMALS IN WINTER, 2 p.m., Nature Centre.

International Student Prayer Day - AN EVENING OF PRAYER AND PRAISE, 7:30 p.m., UC courtyard.

Film - MONA LISA, 8 p.m., WMH.

International Cinema - STROSZEK (West Germany), 8 p.m., MacN 105.

MONDAY, Feb. 23, 1987

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301;

RELAXATION TRAINING GROUP, 5 p.m., register at the Connection Desk, UC Level 3, by 3 p.m.

Biomedical Science Seminar - HORMONE CONTROL IN VERTEBRATE LIMB REGENERATION, Swani Vethamany-Globus, noon, OVC 1642 (demo lab).

Liberal Education Series - CONFLICT IN THE USE OF ECOSYSTEMS, 12:10 p.m., UC 442.

Engineering Graduate Seminar - EXPERT SYSTEMS, Gore Mittal, 3:10 p.m., Eng 106.

Worship - INQUIRY INTO CATHOLICISM, 4:10 p.m., UC 332; ROMAN CATHOLIC MASS, 5:10 p.m., Chapel, UC Level 5.

Marxist-Leninist Study Group - THE U.S. FACTOR IN THE CRISIS OF NATIONAL CULTURE, 7 p.m., UC 332.

Theatre - WHAT THE BUTLER SAW, 8 p.m., Inner Stage, continues to Feb. 28, \$3.50 and \$4.50.

TUESDAY, Feb. 24, 1987

Worship - ECUMENICAL CAMPUS MINISTRY, Know Your Bible, noon, UC 444; ROMAN CATHOLIC MASS, 12:10 p.m., Chapel, UC Level 5; SCRIPTURE ALIVE!, 4:10 p.m., UC 334.

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301; WRITING ASSISTANCE, 5:30 to 9 p.m., Lib 359; CAREER ASSESSMENT SERIES, register at Connection Desk by 3 p.m.

Our World - ROOTS OF HUNGER, 12:10 p.m., UC 442.

Land Resource Science Seminar - MAXIMUM CORN YIELD RESEARCH, Murray Miller, 3:10 p.m., LRS 124.

Information Meeting - LONDON SEMESTER, 7 p.m., MacK 029.

Continuing Education - INTRODUCTION TO STRATFORD/SHAW '87, 7 p.m., register Ext. 3956 or 3957.

WEDNESDAY, Feb. 25, 1987

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301; WRITING ASSISTANCE, 5:30 to 9 p.m., Lib 359; LEARNING/WORK STYLES TESTING, register at Connection Desk by 3 p.m.

Concert - BUNDOCK, noon, UC courtyard.

Continued on page 7.



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Inside this issue: Towards a mature university — Graduate Studies dean Doug Ormrod wants more students, more collaborative programs with other universities. (See story, page 3.)

EVENING PRIMROSE

A promising alternative for ailing tobacco industry

by Pamela Healey

A pretty yellow flower that grows in many suburban gardens may prove to be as lucrative a crop as tobacco in southern Ontario. Prof. Ib Nonnecke, Horticultural Science, and graduate student John Baker are studying the plant evening primrose as a possible replacement for the ailing tobacco industry. The oil of the plant may be useful as a treatment for a host of health problems ranging from alcoholism to allergies.

Today only about 3,300 hectares of southern Ontario farm land are planted in tobacco, down from 10,000 hectares in the late 1970s. Tobacco farmers, who are losing money on corn and finding the soybean market risky, are looking for a profitable alternative. Nonnecke says evening primrose may have a potential value of \$7,500 a hectare, comparable to the prices obtained for tobacco.

At first glance, the biennial evening primrose doesn't look like a winner; seeds can't simply be sown in the field because a built-in reproduction mechanism stalls germination. Nonnecke and Baker have found, however, that by germinating the seeds in a greenhouse and producing small transplants, they can harvest a crop in the fall after a five-month growing season.

The researchers have a large germ plasm pool from the many genotypes of evening primrose found around the province. This pool includes genetic lines with such characteristics as shatter-resistant pods that help prevent seed loss during harvesting and determinate growth habits that speed up maturity and shorten the growing season.

Nonnecke and Baker will select the lines best suited for rapid growth, maximum seed pod production and oil content to increase the plant's commercial value. Their laboratory studies have shown that the oil of one genetic line contains 15 per cent gammalinolenic acid. Normally, cultivars have nine to 10 per cent.

With the current worldwide glut of food and fibre crops, the scientists say it makes sense to diversify. Evening primrose oil is widely used in the pharmaceutical and cosmetics industries. In fact, the list of potential uses of primrose reads like a compendium of folk medicine. It is used in skin care products in England and other European countries and is marketed in Canada as a dietary supplement, available in drug and health food stores.

Continued on page 2.



Graduate student John Baker, Horticultural Science, points to a seed pod on an evening primrose plant. This particular genetic line has the highest known GLA oil content — 15 per cent compared to the normal 9 or 10 per cent.

(Photo by John Majorossy, Illustration Services)

Budget news in March? Let's hope!

The Committee on University Planning hopes to take the University's 1987/88 budget to Senate for information and discussion March 17. But President Burt Matthews told Senate Feb. 17 there are some problems with preparation of the budget to overcome first. Not the least of these is that Guelph doesn't know yet how much money it will be getting from the Ministry of Colleges and Universities.

In November 1986, the government announced that there would be a four-per-cent increase in base funding — a 7.3-per-cent increase over 1986/87 in overall funding for the university system. Of that 7.3 per cent, only the four-per-cent increase is available for discretionary allocation

within the institutions. "The remainder is earmarked," said Matthews, "and the University can't use it to defray inflation in the salaries and non-salaries portion of the basic operating budget."

But based on certain budget assumptions made to date, the University thinks the four per cent will not cover inflationary costs, said Matthews. To meet these costs, some areas across campus have had to make budget cuts.

The president said he doesn't know when Guelph will hear from MCU. "We were supposed to get the news in January." The delay is "not a very satisfactory arrangement" for the University's budget process, he said. ○

Vote called on committee reps

Senators were to vote this week for three of four Senate nominees to the selection committee to find a successor to Dr. Janet Wardlaw, associate vice-president, academic, who is taking early retirement July 1, 1988.

Senate's striking committee recommended three faculty names to Senate Feb. 17 — Profs. Mike Jenkinson, dean's office, OAC; Sandy Middleton, Zoology; and Donna Woolcott, Family Studies. But Prof. John Simpson, Physics, said representation was too narrow, and Senate nominated a fourth person — Prof. Jay Newman, Philosophy.

Ballots were mailed to senators by the University secretary Feb. 18, and were to be returned by Feb. 25. Senate appointed BA student David Handy as student representative to the committee.

Senate also approved appointees to the selection committee to review the position of director of the University School of Part-Time Studies and Continuing Education. Prof. Mark Waldron has served a five-year term.

Committee members are Profs. Don Blackburn, Rural Extension Studies; Ron Downey, OVC dean's office; Ed Herold, Family Studies; and Stuart Hunter, English Language and Literature; and student senator James Haaf, Associate Diploma in Agriculture program.

Senate also received for information a striking committee report that names Prof. David Farrell, History, as faculty representative and Karen Landman, BLA program, as student representative for the Senate Library Committee on the special review committee to review the appointment of chief librarian John Black. ○

Pay equity up for discussion

Advocates of pay equity say it is long overdue; opponents say it is too expensive and impossible to administer.

Members of the University community will have an opportunity to listen to both sides of the pay equity issue in a panel discussion sponsored by the President's Advisory Committee on Equal Rights for Women and Men at the University of Guelph March 4 at 7:30 p.m. in Room 209 A&B, Macdonald Hall.

Pay equity advocate Nan Weiner, faculty of management studies, University of Toronto, was one of the authors of the employment equity manual for Ontario Universities. Opponent Tayce Wakefield, government relations officer for General Motors of Canada Ltd., has published an article giving her opposing view. Prof. Jack MacDonald, vice-president, academic, will moderate the discussion.

Admission is free and everyone is welcome. ○

Senate approves Guelph Turfgrass Institute

Senate gave the okay Feb. 17 to plans to establish the Guelph Turfgrass Institute.

The institute will be involved in turfgrass research, extension and educational activities, and will work closely with government and industry. (See *at Guelph* Feb. 12.) A review of the institute will be held after five years.

In other business, Senate:

- received for information a letter from Queen's University asking Guelph to join the fight against the federal government's 10-per-cent surtax on imported books. The letter was referred to Senate's library committee, but before any further action could be taken, the Conservative government announced in its Feb. 18 budget that the controversial tariff would be lifted;
- approved a Board of Undergraduate Studies revision to the University's policy on academic misconduct that says it is misconduct to submit the same course work or assignment in two or more courses without the prior permission of the instructors involved. Some instructors will allow a student to submit a major piece of work, completed in satisfaction of requirements for one course, to satisfy requirements in another course or courses, says BUGS. But instructors must be consulted in advance, give their permission, and put any appropriate conditions on the work; and
- approved four Board of Graduate Studies changes to the 1987/88 *Graduate Calendar*. Descriptions of the University's special research-oriented centres will be included in a separate section of the calendar, and a statement on the new M.Sc. program in computing and information science will be added. A statement for graduate courses with restricted admission will also be added, saying that graduate students who wish to enrol in these courses must have the permission of the instructor and the graduate supervisor before registering. Some of these courses are costly and may require shared

funding among departments, says BGS, but it has reaffirmed its commitment to the principle that graduate students should not be personally required to pay any share of the costs of these courses. BGS has also produced a clearer statement for the calendar on the number of times a graduate student can repeat a qualifying examination. The examination may be repeated once within a program, and if the student fails a second time, further registration in the Faculty of Graduate Studies will be denied. ○

Names added to graduate faculty

The following people have been added to graduate, temporary graduate and associated graduate faculty:

Graduate faculty: Michael Brookfield, Land Resource Science.

Temporary graduate faculty: Gary Davidson and John Willms, University School of Rural Planning and Development, and Marta Rohatynskyj, Sociology & Anthropology;

Associated graduate faculty: Thomas Burgess, retired/Agricultural Economics and Business; J.R. Duncan, Animal Disease Research Institute, Agriculture Canada, Nepean/Veterinary Microbiology and Immunology; Ronald Pitblado, Ridgetown Agricultural College of Technology/Environmental Biology; Robin Roberts, McMaster University/Biomedical Sciences; Tony van Dreumel, Ontario Ministry of Agriculture and Food, Guelph adjunct professor, Pathology/Veterinary Microbiology and Immunology; and Robert Webb, Human Systems Inc./Human Biology.

Senate received the names for information Feb. 17. ○

Evening primrose Continued from page 1.

Based on clinical studies, evening primrose oil looks promising as a treatment for skin disorders such as atopic-eczema and some allergies. Its benefits for health problems such as alcoholism, premenstrual syndrome, hyperactivity in children, certain types of heart disease, high cholesterol, obesity, multiple sclerosis, and dry eyes and mouth are being researched. Clinical studies are also being done using evening primrose oil to alleviate long-term complications of diabetes and to supplement traditional treatments for rheumatoid arthritis, permitting dosage reductions.

The tiny seeds containing evening primrose oil are the richest-known source of essential fatty acids — especially the rare gamma-linolenic acid (GLA) — that perform vital bodily functions such as providing energy, helping maintain body temperature, insulating nerves, and cushioning and protecting tissues.

They also determine cell membrane structure, which is important for proper functioning of the immune system.

In the body, GLA converts to a physiologically active substance (prostaglandin E1) that lowers blood pressure and inhibits tissue inflammation, abnormal cell proliferation, blood platelet clumping and cholesterol synthesis. It is believed that some people who are unable to metabolize sufficient amounts of this essential fatty acid can be helped by taking evening primrose oil orally or rubbing it into the skin.

Nonnecke says the plant has enormous potential for becoming a high-return, limited-acreage specialty crop for the farmer. It grows well in the former tobacco regions of southwestern Ontario, and little specialized equipment or expense is needed to begin production. The Canadian market for plant products is excellent, he says. In 1985, alone, demand rose by 37 per cent. ○

Graduate student enrolment must double: Ormrod

Guelph has the third highest growth rate in the number of graduate students at Ontario universities. But it also has the smallest percentage of graduate students in relation to total student population. That's an imbalance that Doug Ormrod, dean of Graduate Studies, plans to correct.

The imbalance is especially true in the colleges of Arts and Social Sciences, says Ormrod, but he is encouraged by the amount of activity in these areas to bring new graduate programs on stream. He's optimistic that in the next five years, at least 10 new graduate programs will be in place across campus.

New doctoral programs in rural resource evaluation and environmental analysis, mathematics and statistics, and resource and environmental economics will be appraised in the coming year. Graduate programs in drama, psychology, family studies, plant physiology and toxicology are in the development stages, "and three or four others are in the planning stages," says Ormrod.

Ormrod's plan for his five-year term is to help graduate studies at Guelph "catch up with universities of comparable size and get into the same league. For us, it is meaningful that of the medium sized universities, we are growing most rapidly, and we hope to increase that growth."

Ormrod also wants to see the continuation and expansion of collaborative graduate programs with other universities, such as the Guelph-Waterloo physics and chemistry programs, and the Guelph-McMaster public



Doug Ormrod

(Photo by Sandra Couch, PRI)

policy and philosophy programs. "We should be able to utilize these connections in other fields as well," he says.

The dean says it is vital for the prosperity and reputation of any university to have sound graduate programs. Currently Guelph's graduate student body is just 10 per cent of total enrolment, and it should be 20 per cent, he says. "To become competitive with other

universities comparable to Guelph, we virtually have to double our number of graduate students."

To do this, Ormrod plans to institute an annual meeting of graduate studies faculty, maximize external scholarship programs and encourage departments to provide funds for more graduate teaching assistants. He also plans to continue informing the government of the University's opposition to fee differentials for visa students. The government's recent decision to exempt many sponsoring agencies from the fee differential solves only a short-term problem, he says.

Guelph has introduced a limited number of scholarships for graduate visa students with a dollar value that equals the fee differential, but "it is far preferable for the differential fee to be dropped," says Ormrod.

"We really have to start thinking about being a mature Ontario university," he says. "A mature university has graduate programs in all its departments." ○

Our people

Dr. Dennis Howell, chairman and chief executive officer of Guelph International Development Consultants, will receive a doctor of law degree from the University of P.E.I. at its convocation May 10. Howell was made an honorary fellow of the University of Guelph at convocation Feb. 6. ○

CoSy links with Indonesia

by Ann Middleton

Canada's links with Indonesia are being strengthened by an international computer conference using CoSy, the University's computer conferencing system. A four-month project that runs until the end of April is helping make Canadian universities better known in Indonesia, an increasingly important trading partner of this country.

Toronto communications consultant Maria Cioni worked with Guelph's CoSy group, chief librarian and communications specialist John Black and Guelph International Development Consultants (GIDC) to establish the project at the request of Canada's Department of Communications, which was asked to develop a Canadian-Indonesian link by the Indonesian government.

Cioni says the computer conferencing project uses the facilities of the international telecommunications satellite organization Intelsat to provide the trans-Pacific links. Canada and Indonesia are among the 109 members of this organization, which provides global phone, data and broadcasting links by satellite. Funding for the satellite portion of the project comes from Intelsat's Project Share, a program that

provides health and rural education opportunities through the use of the satellite system. Additional funding comes from the Canadian International Development Agency, the Indonesian government and telecommunications organizations.

When the Department of Communications asked Cioni for ideas on the establishment of an educational communications link, she suggested a computer-based conference because most universities in both countries have computers and access to telephone lines. She says members will gain new experience, building on existing skills, and this will enable the Indonesians to evaluate a new form of communication, while using a technology that "is not super sophisticated and has a relatively slight chance of equipment failure."

Cioni, a regular CoSy user who is well-acquainted with the Guelph campus, chose CoSy over other systems because of its reliability from the user's point of view. The Indonesians became familiar with the system last fall when Black gave a series of workshops in that country.

Black is one of three Guelph professors acting as moderators for sections of the computer-conferencing activities. He moderates

the computer network section, Prof. Ken Kasha, director of the Plant Biotechnology Centre, moderates the biotechnology section, and Prof. Harry Cummings, University School of Rural Planning and Development, and director of the Sulawesi Project, the regional planning section. Cioni moderates the medical section.

Participants in computer-based conferences do not suffer from jet lag or upset stomachs or too many late nights. They sit quietly at their personal computers in frosty Ontario, foggy Halifax or steamy Jakarta.

Cummings uses the conference to discuss regional and environmental planning with colleagues at the Sulawesi Project office in Jakarta, at other Indonesian universities and across Canada. He says the response time is just as quick for Indonesia as for Toronto, Waterloo or Calgary.

GIDC officers Dr. Brian Brandenburg, Dr. Dennis Howell and Bill Harcourt are monitoring all three sections of the project. The international development firm has close links with the University and interests in Indonesia.

Although the project is only scheduled to run for four months, Cioni hopes it will be the start of something much bigger in terms of Indonesian-Canadian communications. ○

Roy brings professional world to University theatre

With more than 12 years of directing, producing and managing Canadian theatre behind him, James Roy feels he has a responsibility to pass on what he has learned to those who are about to enter the theatrical field. And that's just what he's been doing this winter as artist-in-residence in the Department of Drama.

Roy directed students in a production of Joe Orton's "What the Butler Saw," which is running at the Inner Stage until Feb. 28. He ran it as a professional production, starting with the auditions, to give the students "a taste of what they will have to face when they graduate from school."

For the students, the experience was "a culmination of everything they've been learning," says Roy. "They had to make their knowledge work in a situation that was geared to the final product, rather than the process. And they had to make it exciting for the audience. I wasn't satisfied if they simply felt they were learning without paying attention to what they were producing. I was interested in both."

Roy believes it's important that drama students have contact with the professional world before they finish school. "I always regretted that I didn't have the opportunity to do that. I had to learn the hard way." And he believes "it is incumbent on those of us who are working professionally to pass on what we have learned to the next generation."

For Roy, the past 12 years have provided a wealth of experience to pass on. After graduating from York University in 1974, he was undaunted by the fact that "no one would

hire me" — he started his own theatre and hired himself. That was the Blyth Summer Festival, which he founded in 1975 and served as artistic director for until 1979. From 1980 to 1984, he managed the Belfry Theatre in Victoria, B.C., then moved on to the Manitoba Theatre Centre in Winnipeg, which he ran until May 1986. He has also directed plays across the country and in England.

Passing on his experience to students this semester has proved to be satisfying for Roy: "They've soaked up everything I've given them." And he's impressed with the calibre of students he's found here at Guelph. "I wasn't necessarily expecting that from my experience of universities." He's also impressed with the faculty, who have been "very supportive, very hard-working, very much behind this project. They've really made me feel welcome, like I'm part of the process."

Roy's next project will take him to the Lighthouse Festival in Port Dover, where he will direct a new play written by his wife, Anne Chislett. ○

High school students visit campus

Interaction 1986 spilled over into 1987 on Feb. 17 as 437 students from 23 Ontario schools who could not be accommodated at the regular conference in November had their chance to experience a day at the University.

The students preregistered for morning and afternoon lectures by Guelph professors in subjects ranging from terrorism to the destruction of land resources. The conference on global issues is becoming increasingly popular, says Patricia Hollyman, Office of the Registrar, who had to turn away hundreds of interested high school students from the two-day conference in November.

"The idea of Guelph Interaction is to orient high school students to the University, and it's getting bigger every year," says Hollyman. Adding another day to the conference would be a partial solution, she says, but it's difficult to interrupt teaching schedules for too long, and finding available rooms during the fall semester is not an easy task.

Letters are sent to high schools in October advising them of the annual November conference. Interaction 1986 was the eighth time the program has been offered. ○

Personals

Wanted: Small house or bungalow in the country close to Guelph, to rent or lease from May 1, Ext. 4640 or 821-9138.

Lost: Around Feb. 9, set of keys in the OVC library or OVC student mailbox area, on wooden key chain with "Mitch" on it, Michelle, 821-3163.

For Sale: Atomic (arc) bionic slalom, 207-cm skis with Tyrolia 360R bindings; Dynastar omesoft, 200-cm skis with Tyrolia 380 bindings, Gwen or Mark, 822-0923. Electric piano, Ext. 3364 or 824-6874. Boy's BMX bike; women's Raleigh 10-speed; men's Sekine 10-speed, 822-9092. Women's new black leather motorcycle jacket, size 10; new black leather long coat, size 12, Ext. 6775 or 821-5962.

Letters to the Editor

OPIRG responds

In response to the article "EFW Plans Hinge on Environmental Study," which appeared in *Guelph* Feb. 12, the Ontario Public Interest Research Group/Guelph Environmental Council, would like to make the following points. Paragraph 4 states that the University "has listened to concerns about possible dioxins and furans pollution." Note the use of the word "possible." Let's make no bones about it — if a garbage incinerator is built, there will be pollution. Whether that is acceptable or not is the question. Consider the following points:

- Wind pattern studies predict a significant amount of incinerator fallout will prevail over the University campus, agricultural fields and the entire city, along with the Arkell wells, the source of our drinking water;
- There is a growing concern about the environmental effects of incineration effluent. According to the Wellington County Waste Management Master Plan (Stage 2B), pollutants are cited as follows: particulate matter, nitrogen

oxides, hydrocarbons, carbon monoxide, hydrogen chloride and fluoride, sulphur oxides, dioxins and furans, and trace elements;

- The scientific community agrees that "standards" and "guidelines" are at best only a guess thus far. Studies exist that suggest we may already be exposing ourselves to an unacceptable level of dioxins and furans. Consensus widely exists that further long-term research is necessary;
- Incinerators are the single largest source of dioxin emissions. Regardless of the sophistication of abatement controls, not all emissions can be controlled;
- The nature of dioxins are such that they persist in the environment and accumulate in the food chain;
- Canada's health and welfare expert advisory committee on dioxins has said that dioxins are one of the most deadly group of chemicals known to humans, and have been demonstrated to cause birth defects, cancer and immune system disorders;
- When addressing the incinerator issue in Guelph last June, Ontario's Environ-

ment Minister James Bradley said: "It's quite obvious in the context of the findings on toxic rains that all of our technology and all of our preconceived ideas about incinerators have to be re-evaluated;

- Similar warnings about dioxins were expressed by the National Incinerator Testing and Evaluation Program (NITEP) after studies were conducted on the P.E.I. energy-from-waste facility (all proposed incinerators in Canada must be evaluated through NITEP, an Environment Canada program); and
- The environmental impact of incinerator emissions can vary greatly depending on the surrounding geographic and industrial makeup of the area. Consequently, NITEP says the P.E.I. findings cannot be extrapolated to other locations.

Let's not be steamrolled by a process that will inevitably produce a study that will continue to cite so-called "minute" and "trace" quantities of contamination as acceptable.

Ron Kelly,
OPIRG/GEC

The Physics experiment that worked



Nicola Cason, a Grade 10 student at Milton District High School, makes a giant bubble in a surface tension experiment during "Girls in Physics" day. The program convinced Cason that physics was for her.

(Photo by Sandra Couch, PRI)

It didn't have anything to do with laser beams or magnetic fields, and it won't be written up in any scientific journals. But it was an experiment that the Department of Physics considers a success.

The experiment was to see whether a day's immersion in a physics laboratory and university atmosphere would encourage high school girls in Grades 10 and 11 to remain in the maths and sciences, especially physics. Those are the grades in which girls are making hard curriculum choices that will affect their career opportunities, said Dr. Bonnie Edwards, a lecturer in Physics, who organized the experimental "Girls in Physics" day along with Prof. Ernie MacFarland.

The day included a lecture entitled "Structure of the Universe" and two hours of hands-on physics experiments that explored topics ranging from surface tension to the speed of sound. In the evening, the girls and their parents met with several prominent women physicists, who discussed their careers and the importance of having a science background.

The 24 girls came with their science teachers from four high schools in Halton County. Barb Singleton, principal of Georgetown District High School, applauded the program, saying it was a good first step in encouraging high school girls to stay in the sciences. "Not only did the girls have an opportunity to use university-quality facilities," she said, "but they saw the potential span of physics from nuclear physics to the physics of the universe." She said she'd like to see more days where the University could share its

resources with high school students, "because it makes their career choices more clear."

Brenda Trickey, a biology teacher at Milton District High School, described the program as "excellent." Noting that enrolment in the sciences declines among high school girls in the senior grades, she said she intentionally brought along students who weren't sure they would stay in the math and science stream for their final years. "They have been scared away for some reason and have this idea that physics is for the boys."

One of Trickey's students, Nicola Cason, admitted that the day in the physics lab was "more interesting than I thought it would be. I wasn't sure what I was going to do before, because I don't like math," said the Grade 10 student, "but now I'm going to take physics for sure."

Comments along those lines were heard all day, said Edwards, who was pleased at the girls' response to the program. She added that the evening session also received positive responses from the parents. "A number of mothers said they wished they'd been encouraged in the sciences when they were in school, and the fathers were also most enthusiastic."

The question now is how to provide similar days for girls from other parts of the province. The first experimental day was limited to girls from Halton County, but there has been considerable interest from elsewhere, Edwards said. She hopes that the University, school boards and high school science teachers can put together a co-operative program for other high school girls in Ontario, perhaps on an annual basis. ○

Family Studies faculty get grant

Profs. Anne Martin Matthews, Rosalind Gibson and Donna Woolcott, Family Studies, have received a \$100,000 grant from the Max Bell Foundation to study the nutritional needs of the elderly and to develop and test a nutrition education program for this group.

Established by a prominent Canadian businessman in 1972, the Max Bell Foundation funds projects in health services, especially research in nutrition education, health education and preventive health care.

Over a three-year period, the University researchers will assess groups of elderly to determine their special nutritional needs, then design appropriate nutrition education programs. Follow up will include a reassessment of the groups to see if the nutrition education programs have been beneficial.

Woolcott says the information obtained from this study will be used to develop education programs aimed at improving the nutritional health of the elderly, promoting a healthy lifestyle for this growing sector of the population and reducing health care costs for Canadians.

Short courses meet needs of small-scale farm

People no longer need a farm background to be successful small-scale or hobby farmers. They can take advantage of Continuing Education's novice farmer program, which offers a variety of Saturday short courses aimed at helping people learn how to get the most out of their rural properties.

This year's program includes a course on buying rural property that can help make the most of finances. Other courses will explain how to manage a woodlot for both pleasure and profit, create a farm pond and build a hobby greenhouse.

Successful farmers and businessmen have been recruited to give instruction in how to manage a small poultry flock and maintain hay and pasture lands. There are also courses for people keen to set up a small fish farm or save money by cutting meat at home.

All courses run from 9:30 a.m. to 4:30 p.m., include lunch and offer a discount for couples. "Farm Ponds" and "Hay and Pasture" are scheduled for March 7, "How to Manage Your Woodlot," "Home Meat Cutting and Sausage Making" and "Small Poultry Flock Management" for March 28. On April 4, the woodlot and meat cutting courses will be repeated, and "Buying Rural Property" and "Building a Hobby Greenhouse" will be offered.

Because of its popularity, the woodlot management course will be offered a third Saturday, April 11; also scheduled for that day are "Fruit Trees: Grafting, Pruning and Spraying" and "Fish Farming."

For more information or to register, contact Continuing Education, Room 160, Johnston Hall, Ext. 3956. ○

INTERNATIONAL WOMEN'S DAY celebrations in Guelph begin March 3 with MPP Evelyn Gigantes discussing pay equity at 7:30 p.m. at 21 King St. A reception March 6 from 7:30 to 10 p.m. at the Guelph Civic Museum, 6 Dublin St., features the exhibit "Widening Sphere: Women in Canada 1870-1940." The official opening of the celebration is March 7 at 1 p.m. at 21 King St., followed at 1:15 p.m. by author/columnist Joanne Kates speaking on "Fear of Feminism." At 3 p.m., singer/composer Carolyn McDade discusses "International Women's Liberation Struggle." During the afternoon, there will also be a film/video festival and information fair. Saturday evening entertainment begins at 8 p.m. at The Loft, Carden Street, with the Bird Sisters, followed at 8:30 p.m. by the Windsor Women's Theatre performing Michel Tremblay's "Albertine in Five Times." March 8 activities include an afternoon workshop, "Women's Spiritual Journey," with McDade. For more information, call 837-0267.

EUROPEAN EXCURSION is what the HAFA Restaurant is billing its special luncheon March 3, 11:45 a.m. to 1 p.m. Call Ext. 8116 for reservations.

FURNISHED ACCOMMODATION is needed for visiting faculty for the fall term, 1987. Contact the Off-Campus Housing Office, Ext. 2347 or 3929.

A SPLITTER BOX DEVICE that allows shared access to a single ROLM data line can be seen in the display area of the Computing Services Support Group, Room 204, ICS building.

THE DONALD MCQ. SHAVER Awards for Entrepreneurship are intended to identify Guelph students with entrepreneurial potential. Awards are \$1,000, \$500 and \$250, with five prizes of \$50 for honorable mention. Candidates must submit a report that identifies and describes a product and/or service, identifies potential customers, describes the uniqueness of the concept and includes a business plan. Application forms are available from Joan Sephton, Agricultural Economics and Business, Room 211, J.D. MacLachlan building. Shaver will be available Wednesdays and Thursdays from 10:30 a.m. to 5 p.m. in Room 326, J.D. MacLachlan building, to discuss proposals. Deadline for submissions is March 7. Awards will be presented March 23 at 5 p.m. in the Faculty Club, Level 5, University Centre.

CAMPUS USERS OF SHARP APL will be migrating to the new APL*PLUS system this semester. As of April 30, SHARP APL will no longer be available, and users are asked to migrate any needed APL workspaces and files well before that date. A written guide to migrating and converting workspaces and files is available free from the Computing Services Support Group, Room 204, ICS building, Ext. 8888.

THE OPENING and premiere viewing of the exhibition "Printshops in Canada" is March 8 from 3 to 5 p.m. at the Macdonald Stewart Art Centre. This show, which is organized and will be circulated by the centre, documents 26 Canadian printshops dedicated primarily to the production, publishing and printing of editions by artists. Printshops from coast to coast are represented by such artists as Jean Beliveau, Graham Coughtry, Terry Legault, Christopher and Mary Pratt and Joyce Wieland. After the premiere of this show in Guelph, the exhibition will tour nationally to Halifax, Calgary, Burnaby, Montreal, St. John's, Toronto, Stratford, Oshawa and St. Catharines.

A TRAINING SESSION IN CPR, sponsored by the life support committee, is Feb. 28 from 8 to 11:30 a.m. at the Royal Canadian Legion. To register, call Kenn Orr-Brown, 822-4420, Ext. 297.

REPTILES AND AMPHIBIANS of Ontario is the topic of the Guelph Field Naturalists' meeting March 12 at 7:45 p.m. in the Arboretum Centre. Guest Mike Oldham, co-ordinator of the Ontario Herpetofaunal Survey, will give tips on finding and identifying Ontario's reptiles and describe their life histories and habitats.

A TASK FORCE has been established to assess user requirements of an Optical Mark Reader service on campus. The task force has decided to continue with the existing card-based course evaluation system, which had previously been planned to operate on the ScanTron sheet reader. The test scoring system will, however, continue with ScanTron sheets. Questions and comments may be directed to any member of the task force: Profs. Gord Hines, Mathematics and Statistics; Peter Leppmann, Psychology; and Helier Robinson, Philosophy; Brian Pettigrew, Student Services; and Ron Elmslie and Ted Dodds, Computing Services.

BRAINS, BRAWN, Bran & Bananas, is a nutrition and fitness exhibition in the University Centre courtyard March 3 from 9 a.m. to 4 p.m., sponsored by the Counselling and Student Resource Centre. It will focus on the link between good nutrition, fitness, general well-being and academic performance. In addition to information booths, displays and films, there will be free samples and self-assessment opportunities.

A FUNDING OPPORTUNITY is provided by Challenge '87, a program of wage subsidy for students from the federal Department of Employment and Immigration. The program's objective is to provide students with jobs lasting a minimum of six weeks and a maximum of 18 weeks in an activity that will be of direct relevance to their career plans. Wage subsidies will be up to \$4.35 per hour. Application deadline is March 6, 1987; application forms are available from the Office of Research.

MUSIC FROM LONDON'S Pleasure Gardens is the program scheduled by Mary Enid Haines, soprano, Alison Melville, baroque flute and recorder, and Valerie Weeks, harpsichord, at the Department of Music's noon-hour concert March 5 in Room 107, MacKinnon building. Haines has performed in Canada, South America, Africa and England and has been soloist with the Toronto Chamber Society, the Jubilate Singers and the Te Deum Orchestra. Melville, winner of two Canada Council Arts Awards and a fellowship from the University of Toronto, has appeared with the Toronto Symphony and the Canadian Opera Company. Weeks has performed extensively as a soloist and chamber musician throughout Canada, the United States and Europe, and is a winner of the First International Edinburgh Harpsichord Competition and the CBC Talent Competition. Program I at 12:10 p.m. will include "Hush, Ye Pretty Warbling Choir" by Handel, "Stizzoso, Mio Stizzoso" by Pergolesi and "Sonata for Harpsichord" and "The Broom of Cowdenknows" by Bach. Program II at 1:10 p.m. will feature Bach's "Sonata for Harpsichord, Op. 5, No. 2," several numbers by James Hook and "Gay Florimel" and "Ariel's Song from the Tempest" by Arne.

TRADITIONAL SCOTTISH storyteller Duncan Williamson is the special guest at an evening of Scottish story, poetry and song March 2 at 8 p.m. at the Faculty Club, Level 5, University Centre. Williamson, author of two books, belongs to a family of "travellers," who used to spend their summers on the road, making a living through casual occupations. Admission is \$2; contact Prof. Ted Cowan, Ext. 3226, for more information.

THE INTERFAITH DIALOGUE Group of the University is sponsoring an evening session on "The Living Word: The Role of Scripture in World Religions" March 3 at 7:30 p.m. in Room 103, University Centre. All are welcome and refreshments will be served.

COMPUTING SERVICES staff are now converting the PERK system to a new system under APL*PLUS. Anyone wishing to convert existing PERK files should contact Les Dunn at Ext. 6570 (sosdunn in CMS or LDU on CoSy).

THE WRITING CENTRE, a program sponsored jointly by the Department of English Language and Literature, the Library and the Counselling and Student Resource Centre, is offering two writing workshops. "How to Write an Essay," which provides practical ideas on organizing and writing, is March 3. "Report Writing," showing how to prepare clear and effective reports and technical writing assignments, is March 10. Both workshops are at noon in Room 333, University Centre. Contact the Connection Desk, Level 3, UC, for further details.

Five new awards available to students

Five new awards received Senate approval Feb. 17. They are:

The Tommy Thompson Fellowship: — an annual award of \$1,000, tenable with other Senate awards, to a student with high academic standing entering a graduate program in horticultural science. Preference will be given to a student in ornamental horticulture. Application must be made to the chair of Horticultural Science by June 1. The OAC awards committee will make the selection on the recommendation of the chair of the department. The donor is White Rose Nurseries Ltd.;

Class of '51 OAC Leadership Award: — an annual award of \$1,000, tenable with other Senate awards, to a student graduating from a degree or associate diploma program in OAC who has a "B" standing in the final year of study and who has demonstrated leadership in college or University extracurricular activities. Application is not necessary. The OAC awards committee will make the selection on the recommendation of the dean of OAC. The donor is the OAC Class of '51;

Francis E. Chase Memorial Scholarship: — an annual undergraduate award of \$500, tenable with other Senate awards, to students who have completed semesters 4, 5 or 6 of the B.Sc.(Agr.) program, majoring in applied microbiology. The award will be made on the basis of academic standing, leadership in extracurricular

activities and demonstrated financial need. Application is to the assistant registrar, student awards, by April 1. The OAC awards committee will make the selection. The donor is Jane M. Chase;

Sue Chase and John Steckle Fellowship in Agriculture: — an annual award of \$1,500, tenable with other Senate awards, to a graduate student in the Department of Horticultural Science or Animal and Poultry Science who is enrolled in an M.Sc. or PhD program. Candidates must have high academic standing, be involved in research related to the interests of the department, and must have demonstrated an interest in Canadian agriculture. Application is to the dean of OAC by June 1. The OAC awards committee will make the selection. The award will be made in alternating years to students in each department, starting with Horticultural Science in 1987/88. The donors are Robert and Jean Steckle;

OAC Public Speaking Awards: — two annual awards of \$250 each, tenable with other Senate awards, to the students in the B.Sc.(Eng.), BLA, B.Sc.(Agr.) or B.Sc.(food science or earth science) programs with the highest grades in the course 37-215 "Public Speaking" in the fall and winter semesters. Application is not necessary. The selection will be made by the OAC awards committee. The donor is the OAC Class of '45. ○

On poverty and people . . .

The western world enjoys a huge agricultural surplus while an eighth of the world's population is chronically undernourished. This is a "horrendous paradox," said Prof. Tom Warley, Agricultural Economics, speaking at the second of a four-part liberal education series dealing with conflicts between the fields of agriculture and ecology.

Poverty, not hunger, is the real question that must be addressed, said Warley. The world can easily feed three times the current population of five billion, but that won't happen as long as poverty exists. While admitting that the richer nations of the world must help the poorer ones, he laid the primary responsibility for development and relief of hunger at the feet of the poor nations themselves.

Prof. Doug Larson, Botany, countered the suggestion that what is good and beneficial to humankind answers the primary question of what is good, saying that science must take into consideration the environment and that people need not always take precedence in the world. He argued that many of the problems facing people today are conceptual problems "and we can't wait much longer to find solutions to them."

Larson also said that the ecological problems people create in their quest for wealth and comfort lead to the idea that what science has wrought, science can solve. That is not necessarily true, he said.

The series continues March 2 at 12:10 p.m. in Room 442, University Centre, with a discussion of "Green Genes: Revolution or Evolution?" ○

Job opportunities

As of *at Guelph* deadline Feb. 20, 1987, the following opportunities were available:

Clerk I, Division of Continuing Education; temporary full-time from March 16/87 to March 15/88. Hiring range: \$247.17 to \$268.03.

Stenographer, Division of Continuing Education; temporary full-time from March 16/87 to July 10/87. Hiring range: \$255.27 to \$277.38.

Technician, Department of Pathology, OVC; temporary full-time for about six months. Hiring range: \$397.77 to \$431.78.

The following positions were available to on-

campus employees only:

Launderer II, Laundry Department. Job rate: \$10.25 per hour; probation rate: \$.20 per hour lower than job rate.

Clerk II, Department of Agricultural Economics and Business. Salary range: \$291.19 minimum; \$336.53 job rate (level 5); \$419.16 maximum.

Research Technician, Department of Crop Science. Salary range: \$397.77 minimum; \$460.01 job rate (level 5); \$570.62 maximum.

Custodian 2, Housekeeping Department. Job rate: \$9.77 per hour; probation rate: \$.20 per hour lower than job rate. ○

Personals

For Rent: Room in new home within biking distance of University, available March 1, female non-smoker, Ext. 6775 or 821-5962. Two-bedroom cottage with guest cabin, Sauble Beach, available May to September, 821-5962, after 5 p.m. Two-bedroom apartment in house, available April 16, 823-1560, after 6 p.m. ○

Next Week at Guelph

Continued from page 8.

Interdepartmental Seminar Series in Systematics - PANDEMONIUM IN PUSSY-TOES: Evolution of the *Antennaria* (Asteraceae) Polyploid Agamic Complexes, 3:10 p.m., BG&Z 309.

OVC Evening Business Management Program - ADMISSION TO A PARTNERSHIP, Bruce Karcher, 7 p.m., OVC 508.

Continuing Education - JAZZ APPRECIATION, 7 p.m.; ART FOR AMATEURS AND CONNOISSEURS, 7:30 p.m.; register Ext. 3956/3957.

Theology from Experience - THE EXPERIENCE UNDERLYING LIBERATION THEOLOGY, 7:30 p.m., UC 332.

Pugwash Panel Discussion - PEACE ACTIVISTS, 7:30 p.m. LRS 124.

THURSDAY, March 5, 1987

CUSO - INFORMATION TABLE, 10 a.m. to 2:30 p.m., UC courtyard.
Society for International Development - DEVELOPMENT IN THE MIDST OF ETHNIC TURMOIL: THE CASE OF SRI LANKA, Jim Shute, noon, MacK 132.

Worship - ECUMENICAL CAMPUS MINISTRY, Meet and Eat with Rev. Ted Scott, noon to 2 p.m., UC 103; COMMUNITY EVENING, 5 to 6:30 p.m., OTAS Lounge, UC Level 5; EXPLORATIONS IN MEDITATIVE PRAYER, 5:10 p.m., Chapel, UC Level 5.

Concert - Mary Enid Haines, soprano, Alison Melville, baroque flute & recorder, and Valerie Weeks, harpsichord, 12:10 and 1:10 p.m., MacK 107.

Apiculture Club - QUEEN REARING, Gord Grant, 5:10 p.m., Graham 200.

CSRC - JOB SEARCH, 6 p.m., register at Connection Desk by 4 p.m.

Film - THE BIG CHILL, 7 and 9:20 p.m., Mac 149.

The following abbreviations are used in *at Guelph*: AC=Athletics Centre; ANNU=Animal Science Nutrition; BG&Z=Botany-Genetics-Zoology; CM=Chemistry-Microbiology; CS=Crop Science; CSRC=Counselling and Student Resource Centre; Eng=Albert A. Thornbrough building; FS=Food Science; HAFA=Macdonald Stewart Hall (Hotel & Food Administration); HB=Human Biology; Hort=Horticultural Science; ICS=Institute of Computer Science; JH=Johnston Hall; LA=Landscape Architecture; Lib=McLaughlin Library; LRS=Land Resource Science; MacK=MacKinnon building; MacN=MacNaughton building; PCH=Peter Clark Hall; UC=University Centre; VMI=Veterinary Microbiology and Immunology; WMH=War Memorial Hall.

Next Week at Guelph

THURSDAY, Feb. 26, 1987

Clinical Studies Seminar - NEW CONCEPTS IN THE PATHOGENESIS AND DIAGNOSIS OF CARDIOMYOPATHY IN THE DOG, Bruce Keene, 10 a.m., Clinical Studies 508.
Pathology Graduate Seminar - USE OF SERUM AND CFS ANTIBODY TITERS IN THE DIAGNOSIS OF EQUINE VIRAL ENCEPHALOMYELITIS, E. Scott, 11:10 a.m., Pathology 220.
Society for International Development - INTERNATIONAL STUDENTS: A VANISHING BREED? Don Amichand, noon, MacK 132.
Worship - ECUMENICAL CAMPUS MINISTRY, Meet and Eat, noon to 2 p.m., PCH; COMMUNITY EVENING, 5 to 6:30 p.m., OTAS Lounge, UC Level 5; EXPLORATIONS IN MEDITATIVE PRAYER, 5:10 p.m., Chapel, UC Level 5.
Cellular and Molecular Biology Journal Club - MEETING, Margaret Fallding, noon, VMI 101.
Concert - ANONYMUS, early music group, 12:10 and 1:10 p.m., MacK 107.
Apiculture Club - BEESWAX CANDLE-MAKING DEMONSTRATION, Ivan Petrick, 5:10 p.m., Graham Hall 200.
Film - CASABLANCA, 7 and 9:20 p.m., Mac 149.
Drama - WHAT THE BUTLER SAW, 8 p.m., Inner Stage, \$4.50, continues to Feb. 28.

FRIDAY, Feb. 27, 1987

Worship - CATHOLIC MASS, 8:10 a.m., Chapel, UC Level 5.
Histopathology Seminar - Grant Maxi, 9 a.m., Path 220.
Biomedical Sciences Graduate Seminar - THE UNIQUENESS OF BOVINE PLATELETS, G. Bondy, noon, OVC 1642 (demo lab.)
Current Issues in Agriculture - REDUCED INPUT AGRICULTURE, Ann Clark, 3 p.m., CS 121.
OPIRG Friday Film - THE TIMES OF HARVEY MILK, 8 p.m., MacN 105.

SATURDAY, Feb. 28, 1987

CSRC - JOB HUNTING PROGRAM, 9 to 4:30 p.m., register at Connection Desk, UC Level 3, by 3 p.m. Friday.
Continuing Education - INTERMEDIATE LOTUS 1,2,3; WORDPERFECT I, 9:30 a.m., register Ext. 3956/3957.

SUNDAY, March 1, 1987

Worship - ROMAN CATHOLIC MASS, 10:10 a.m., PCH; ECUMENICAL CAMPUS MINISTRY (Anglican, Presbyterian, United), 10:30 a.m., Chapel, UC Level 5.
Children's Concert - MR. DRESSUP, 1 and 3 p.m., WMH, \$6.
Sunday Afternoon Walk - NATURE VIDEOS, 2 p.m., Nature Centre.
Sunday Cinema - TRUE STORIES, 7 p.m.; DOWN BY LAW, 9 p.m., WMH.
International Cinema - THE TASTE OF WATER (Holland), 8 p.m., MacN 105, \$2.

MONDAY, March 2, 1987

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301.
Liberal Education Series - GREEN GENES: REVOLUTION OR EVOLUTION? 12:10 p.m., UC 442.
Engineering Graduate Seminar - EXPERT SYSTEMS, APPLICATION AND DEMONSTRATION, Hadi Farazdaghi, 3:10 p.m., Eng 106.
Worship - INQUIRY INTO CATHOLICISM, 4:10 p.m., UC 332; ROMAN CATHOLIC MASS, 5:10 p.m., Chapel, UC Level 5.
Continuing Education - SINGLE PARENT FAMILIES, 7:30 p.m., register Ext. 3956/3957.
Scottish Evening - STORY, POETRY AND SONG, Duncan Williamson, 8 p.m., Faculty Club, UC Level 5, \$2.

TUESDAY, March 3, 1987

CSRC - BRAINS, BRAWN, BRAN AND BANANAS, 9 a.m. to 4 p.m., UC courtyard; ESSAY WRITING, noon, UC 333; CAREER DEVELOPMENT ORIENTATION, noon, UC 301; WRITING

ASSISTANCE, 5:30 to 9 p.m., Lib 359.

Symposium - CHILDREN AND MONEY, Donna Lero, noon, FACS 103.

Worship - ECUMENICAL CAMPUS MINISTRY, Know Your Bible, noon, UC 444; ROMAN CATHOLIC MASS, 12:10 p.m., Chapel, UC Level 5; SCRIPTURE ALIVE!, 4:10 p.m., UC 334.

Psychology Colloquium - THE ACQUISITION OF SKILL OF MENTAL CALCULATION IN ADULTHOOD, Neill Charness, noon, MacK 316.

Our World - SOUTH AFRICA: ACTION AGAINST APARTHEID, 12:10 p.m., UC 442.

Land Resource Science Seminar - SOIL-PLANT WATER RESEARCH AT CANBERRA, J.B. Passioura, 3:10 p.m., LRS 124.

Physics Seminar - ION MICROBEAM ANALYSIS APPLIED TO FUSION MATERIALS, B.L. Doyle, 4 p.m., MacN 113.

Continuing Education - INTERMEDIATE LOTUS 1,2,3, 7:30 p.m., register Ext. 3956/3957.

Interfaith Dialogue Group - THE LIVING WORD: THE ROLE OF SCRIPTURE IN THE WORLD RELIGIONS, 7:30 p.m., UC 103.

College Women's Club - FASHION '87, 7:30 p.m., Arboretum Centre, \$6.

WEDNESDAY, March 4, 1987

Gerontology Research Centre Seminar - ELDERLY WIDOWS AND WIDOWERS: PATTERNS OF SOCIAL SUPPORT, noon, UC 441.

CSRC - CAREER DEVELOPMENT ORIENTATION, noon, UC 301; JOB SKILLS WORKSHOP, 2 p.m., register at Connection Desk by 11 a.m.; WRITING ASSISTANCE, 5:30 to 9 p.m., Lib 359.

Concert - COLLEGE ROYAL TALENTFEST PREVIEW, noon, UC courtyard.

Guelph Committee Against Imperialist War Preparations - CONFERENCE AGAINST THE TWO SUPERPOWERS, noon, UC 441.

Worship - ECUMENICAL CAMPUS MINISTRY, Ash Wednesday, Eucharist 12:10 p.m., Chapel, UC Level 5; ROMAN CATHOLIC MASS, 12:10 p.m., UC 103; THEOLOGY FROM EXPERIENCE, 7:30 p.m., UC 332.

Entrepreneurship and Your Business - SOME BUSINESS OPPORTUNITIES FOR YOU TO CONSIDER, Donald McQ. Shaver, 3:10 p.m., APS 141.

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